

MAY 24 1944

HOW TO FIGHT THE PERIL BEHIND THE LINES

KEEP YOUR SHIRT ON SOLDIER



EXPOSED SKIN AFTER DARK IS MEAT FOR THE MALARIA MOSQUITO

FIGHT THE PERIL BEHIND THE LINES



BETWEEN SUNDOWN AND SUNRISE... THE MALARIA MOSQUITO IS MORE DEADLY THAN THE ENEMY

THE PERIL BEHIND THE LINES

DON'T BE A JERK - DON'T GET A MOSQUITO BAYONET IN YOU



KEEP COVERED FROM SUNDOWN TO SUNRISE AND - USE YOUR REPELLENT



SOLDIER BEWARE

EXPOSED SKIN AFTER DARK IS MEAT FOR MALARIAL MOSQUITOES

PROTECT YOURSELF - PROTECT YOUR BUDDIES - KEEP COVERED



Seeing America.

COMMENCING at age 41, you can spend \$500 every year of your life on travel, vacations, or luxuries, and still have \$15,000 left at age 100!



MALARIA

—An Editorial by MORRIS FISHBEIN

EPIDEMIOLOGISTS constantly argue as to which disease is of greatest importance as a menace to mankind. There are advocates who mention typhus, others who emphasize influenza and the respiratory diseases; some insist that the venereal diseases are of greatest importance; but most authorities are willing to concede the palm to malaria. The history of mankind indicates that malaria may well have been responsible for the downfall of the civilizations of Greece and Rome. Malaria does not strike and kill as do yellow fever and plague, but it makes people sick. In many parts of the world it is as frequent as poverty. Altogether more people are probably affected by malaria than by any other known disease. In 1931 nearly 18,000,000 people were reported to the League of Nations to be under treatment for malaria, yet the number of those going without treatment was far greater. About 2,000,000 people every year in the United States have malaria, and about 3,000 people each year die primarily of malaria in our country.

Malaria occurs where the warmth and the dampness permit the right kind of mosquitoes to develop and where there are human beings with malaria from whom the mosquitoes may carry the infection to other people. In some counties in the United States the rates have been reported as up to 100 for each 100,000 people.

The mosquito that carries malaria is the female of the species—and in her case she certainly is more deadly than the male. Moreover, this mosquito is of a special type known as the anopheles, and not only anopheles but a special kind of anopheles: The female anopheles that carries malaria sucks human blood, and the male does not. The female anopheles that carries malaria stands with her

rear elevated, whereas all other mosquitoes in the United States stand parallel to the skin when they do their biting.

The mosquitoes bite most frequently at night. They spend the daytime in dark places and houses and barns. Because these mosquitoes bite at night, the superstition developed that night air was dangerous. The night air of Greece and Rome *was* dangerous, but only because it was full of mosquitoes carrying malaria.

Unluckily for mankind the mosquito is not made sick by the parasite of malaria. Two weeks after that mosquito has picked up the malarial parasite, it will have developed in the mosquito's body. The parasites must also go through a period of development in the human body before they begin causing chills and fever. They develop in the red blood cells; the red blood cells split; the parasites emerge into the blood; then the fever and the chills begin. The infected person develops the symptoms about twelve days after being bitten, although as many as thirty days may elapse.

In the campaign to protect our soldiers against malaria all over the world, many different technics have been adopted. These include draining of swamps, the use of mosquito netting, mosquitoproof clothing, the administration of quinine and atabrine, the use of various insecticides, and with all of this, an intensive campaign of education to warn the soldier against the danger of the mosquito. Some of the excellent posters that have been developed for this purpose are reproduced on the cover of this issue of *HYGEIA*. Perhaps as one of the great benefits of this war there may come an improved technic for the prevention and control of malaria—applicable en masse throughout the world. That would indeed be a blessing.

HENRY JUNIUS SCHIRESON is king of the plastic surgery quacks—without equal among the suave, scheming parasites who achieve riches by exploiting the suffering bodies of deluded men and women.

Schireson's title as lord of all his loathsome brethren was earned by forty years of peddling medical hokum. At first he appealed largely to the transplanted European peasants, ignorant and trusting, of the great cities of the East and Middle West. Later, emboldened by the ease of his success, he added dupes from among the farmers and merchants of New England, the movie stars of New York and Hollywood, Chicago's captains of industry and finance, Philadelphia's society matrons. He has been exposed, caught, convicted, jailed and fined. But always he has been turned loose again to practice his grisly arts on the dumb, the suffering, the credulous.

The preposterous career of Schireson, from the first forged diploma down the years to his present luxuriously appointed studio on Phila-

KING OF THE

Adapted with added comment from "The Philadelphia Record"

By **ROBERT MARIS**

delphia's smart Spruce street, is an epic of deceit and crookedness, pseudoscientific flummery, weird testimonials, bloody operations, fabulous fees, lawsuits, licenses granted and revoked and granted again, commissions, publicity, pictures ("Before Treatment"—"After Treatment!"), trials, pleas, orders, counts. Trailing him, but always too far behind, has been the pitiful wake of his victims—an old woman fleeced of her life's savings, men mutilated by his inept surgery, a girl with a smashed nose (Schireson was going to remodel it!), another without legs. (Schireson sawed into the bones in a useless, bungling effort to straighten her bowed legs. Gangrene followed, then amputation.)

Schireson's record—the whole odorous length of it—is laid bare in a series of articles published recently in the *Philadelphia Record*. To get the facts, *Record* reporters spent months searching out and studying court orders, transcripts of trials and hearings, statements of judges, medical boards, licensing agencies. Among other things, the reporters found out:

That Henry Junius Schireson came here from Russia in 1889 at the age of 8; that he attended public schools (Continued on page 454)

"KING OF THE QUACKS"
Schireson Could 'Find' Ills Patients Never Suspected - Used Machines on Them



"SPECIALIST" SCHIRESON

of the extension in parts of the man body... With this equipment Schireson and his aides took little difficulty in convincing patients that they were dangerously ill and that unless they did... would likely die... Schireson's patients at that time were almost entirely foreign born, mostly, to judge by the names recorded in the indictment, Greek or Slav origin... through... the person of the patient... Grand Jury... observed him to... a number... blood... Pritikin... run into a... design... Schireson... refused... on a bench... are he go... State is... with the... Detroit... and were... had... a report... He... City... James... went... him from... and to... did their... has not... his—... patients for... that... carried... Schireson's... abilities of... were... Schireson...

QUACKS

"KING OF THE QUACKS"
Schireson's 'Institute' Enrolled 14,000 Patients In New York Swindle



QUACK SCHIRESON

choled... and the... pending... counts and... nation alleg... oration was... November 12... eared with his... P. Bradley, to... their kingly... to contemder... "I do not... and his attorney... into the... useful that... whether... ggy... scialtion... "Tener... at the com... 10 month... will be... about the... or Joe... m with... e accomp... ch in the... i have be... rem... e cur... involving... old lead... eation of his... medicine in Pe... is no indra... hat such a... ed. Organized... turned his... ch years were... ble years for Schireson... the Journal of the... Medical Association was to... cognizance of him... adve... licen... licen... Schireson, he... was at... enough of Pennsylvania... to... were paid a... money as it would only be a... waste of money... give advice and consultation in this manner we have a... lished an honest reputation... extensive practice... Other physicians were... invited to avail them... of Schireson's "institute"... "Physicians are unable... whom they apply to us for... should apply to us for... consultation, for which... will be made... Then, let other... to appreciate that flow... not waste your time, n... health with any doctor... understand your d... come to our celebrated... who will cure you... these advertisements... attention of the St... of Labor, wh... Amer... 1914 depart... investigation... 1914 depart... investigate... conditions (i... Schireson) w... by an... man who... Schireson... the invent... one of the... of cour... immediate... are longer... the institu... are for... "These... going to... comm... Health... having the... vate phys... to be in pr... Schireson... from a fir... the "insti... vate work... due and v... been wit... less with...

Here is a real life version of the "before and after" technic featured in Schireson circulars. Top: Schireson as the "eminent European specialist" pictured in the ads. Bottom: Schireson as he appeared in court on the latest fraud charge

King of Quacks' Schireson Back Again After Year in Jail

DR. SCHIRESON HELD IN BAIL FOR HEARING

Ex-Patient Testifies About Weeks of Agony

Dr. Henry Justin Schireson, plastic surgeon, appeared in a courtroom yesterday for the first time since his discharge from a Federal penitentiary more than a year ago.

He was arraigned before Judge James H. McLaughlin, charged with the possession of a forged certificate which he had secured from a Federal penitentiary more than a year ago.

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DR. HENRY J. SCHIRESON as he looked at the time he was arrested for possession of a forged certificate.



DR. HENRY J. SCHIRESON as he looked at the time he was arrested for possession of a forged certificate.



Plastic Surgeon Meets Two Patients—in Court

"My husband was never jealous... until the plastic surgeon unmasked my hidden beauty..."

Dr. Schireson, who has remained in prison since his arrest last year, took on a thrilling new meaning the day she left the plastic surgeon. As beautiful, now she was herself in a lifetime of happiness. She came naturally, even longer for doctors. Her plastic surgeon, who has remained in prison since his arrest last year, took on a thrilling new meaning the day she left the plastic surgeon. As beautiful, now she was herself in a lifetime of happiness. She came naturally, even longer for doctors. Her plastic surgeon, who has remained in prison since his arrest last year, took on a thrilling new meaning the day she left the plastic surgeon. As beautiful, now she was herself in a lifetime of happiness. She came naturally, even longer for doctors.

SCHIRESON HELD IN \$5000 BAIL

Dr. Henry Justin Schireson, plastic surgeon, was held in \$5,000 bail for a hearing in Federal court yesterday.

The doctor, who was arrested last year for possession of a forged certificate, was held in \$5,000 bail for a hearing in Federal court yesterday.

The first book to answer such questions as these about Plastic Surgery

- Why does remodeling the outward appearance of the face and body have such a profound effect on the health of the individual?
- How is "facial rejuvenation" accomplished?
- What are the "facial rejuvenation" operations?
- Can disfigurement be removed by plastic surgery?
- How are the plastic surgeon's operations performed?
- How are the plastic surgeon's operations performed?

AS OTHERS SEE YOU
THE STORY OF
PLASTIC SURGERY
By DR. HENRY J. SCHIRESON
Noted Philadelphia Plastic Surgeon
ILLUSTRATED WITH 180 ACTUAL PHOTOGRAPHS AND 59 DRAWINGS

Ex-Patient of Schireson Dying in Shore Hospital of Streptococcus Infection

No Link Shown Between Woman's Ailment and Her Operation, but She Was Never Ill Before

Dr. Henry Justin Schireson, plastic surgeon, is accused of having performed an operation on a woman who is now dying in a hospital of a streptococcus infection.



'KING OF THE QUACKS' Schireson Never Lacked Diplomas or References—With Shady Signatures

Fertile Imagination Supplied Deficient Qualifications, Certificate Which Michigan Found a Forgery Won Him Many State Licenses

Dr. Henry Justin Schireson, plastic surgeon, is accused of having performed an operation on a woman who is now dying in a hospital of a streptococcus infection.

Dr. Schireson Arrested On Ex-Patient's Charge; Dodges Police 7 Hours

Rises From Office on Warren Street, Wash. York Says News Operation Was a Failure

Dr. Henry Justin Schireson, plastic surgeon, is accused of having performed an operation on a woman who is now dying in a hospital of a streptococcus infection.

Girl Walked Into Office Of Schireson in Chicago—And Never Walked Again

Amputation of Legs Necessary After He Operated, 'Y' He Escaped Criminal Prosecution, His Income Exceeded \$500,000 a Year

Dr. Henry Justin Schireson, plastic surgeon, is accused of having performed an operation on a woman who is now dying in a hospital of a streptococcus infection.

From the circular shown above: "Her whole life took on thrilling new meaning the day she left the plastic surgeon. . . ." This old hokum takes on new meaning when viewed against a background of newspaper clippings about the King of Quacks

By **HARRY GOLD**



facts. He is really seeking assurance against the threat to his whole system of security.

The doctor who is fully aware of the emotional components of the problem will not pass this interest off lightly, for he will discern behind it the full impact of a life's plan, hopes and aspirations, all of which seem to be in imminent danger of collapse.

This aspect is not so important in the acute diseases. There the patients either die or get well. They do one or the other with fair dispatch. Furthermore, they are too preoccupied with current discomforts to care much about the future.

Not so with a chronic disease like rheumatic fever. Usually, these patients neither die promptly nor do they get well. Most of them remain patients the rest of their lives.

One of the primary needs of such patients is

ITS OUTLOOK AND MANAGEMENT

The Outlook

WHAT lies in store for the person who develops rheumatic fever?

This is probably the most urgent question which stirs the patient or, if it is a youngster, the parents.

The patient usually consults his doctor with a different question on his lips: "I want to know whether I have rheumatic fever or rheumatic heart trouble." He may also say: "If I have these things, what shall I do about it?"

Often, as the physician explains to parents what the heart disease is like and what measures one must take to control it, he discovers that he doesn't have their full attention. They are being distracted by more pressing questions: What is going to happen to the child? Is she going to die soon, or become a cripple? Will she be able to go to school? Will she be able to marry? Will she be able to bear children?

I believe that in general patients have more interest in prognosis, or outlook, than in diagnosis and treatment. They don't always speak of it because it implies fear and lack of courage. Sometimes it is clearly expressed: "I don't care what I've got or how much treatment I have to take. Will I get well? Will I be able to carry on?" The patient is after more than

psychologic adjustment to the realities of their own lives. Patients often carry on a form of guerrilla warfare with their disease. When they think it isn't looking, they violate every rule of conduct it imposes on them.

They must learn to live with their disease on a basis of understanding and acceptance, not defeat. They can make friends with it. They must cease to resent it as an intruder. It's like their shadow. Whatever they do or wherever they go, they can't leave it behind. They must include it in all their plans and make provisions for it.

It is possible to arrange a fairly satisfactory life on that basis. In order to succeed here, however, the patient needs a great deal of help and guidance. Not only doctors but also public health nurses, social workers, teachers, recreational workers and others all help provide the necessary guidance.

If we are going to be in a position to help patients with rheumatic fever devise suitable programs for the conduct of their lives, one of the most vital bits of information we should draw on is the individual patient's prognosis. What is this patient's outlook? How long is he going to live? How long is he going to be able to work? What is his likelihood of being able to carry on an occupation without an endless succession of interruptions due to acute illness?

This information isn't always easy to get. It's only partly factual. The rest is a judgment of the experts. Many facts have to be considered. The frequency of recurrence of rheumatism in the patient, the length of time he has had the disease, the size of the heart and the presence or absence of symptoms of heart failure are some of the factors which determine the judgment of prognosis.

A chronic disease is like the patient's shadow—he must learn to accept it and live with it, for it will be with him always



We don't seek out that information merely to be able to tell the patient that he is going to live long or die soon. Not at all. With this information, we are better able to help the patient plan his life. It is particularly important in vocational guidance. It would be unwise to recommend a long, grueling course of professional studies in college for a patient 17 years old who already has a heart large enough nearly to fill the chest, has had active carditis during the past three years and has symptoms of heart failure. But it would be equally unwise to advise against such a career for a person of that age who had an attack of rheumatism at the age of 10 and in the intervening years showed little tendency to recurrence, with little enlargement of the heart and complete freedom from symptoms. The first patient is not likely to survive the age of 25. The second stands a good chance of living and carrying on well to the age of 55 or longer.

Several important studies of the outlook for the patient with rheumatic fever have been made. Particularly interesting is the work on natural history of the Research Committee of the New York Heart Association recently published by Dr. Alfred Cohn and Claire Lingg in *The Journal of the American Medical Association*. This study covers about 12,000 patients over a period of fifteen years. In 3,000 cases, the full story was known from the beginning of

the disease to the time of death. In a similar project, Dr. May Wilson studied the life history of childhood rheumatism in a group of some 600 patients during the past twenty years and has assembled her experience in a book, entitled "Rheumatic Fever," published in 1940 by the Commonwealth Fund. It contains many splendid bits of information about what we may expect in the patient who acquires rheumatic fever.

A few of the more pertinent facts which issue from these studies should be examined:

If a person develops rheumatic fever, the chances are about eight out of ten that he will also acquire rheumatic heart disease. There are indications that in every case there is some heart involvement, but the likelihood is that two out of every ten patients escape without detectable organic disease of the heart.

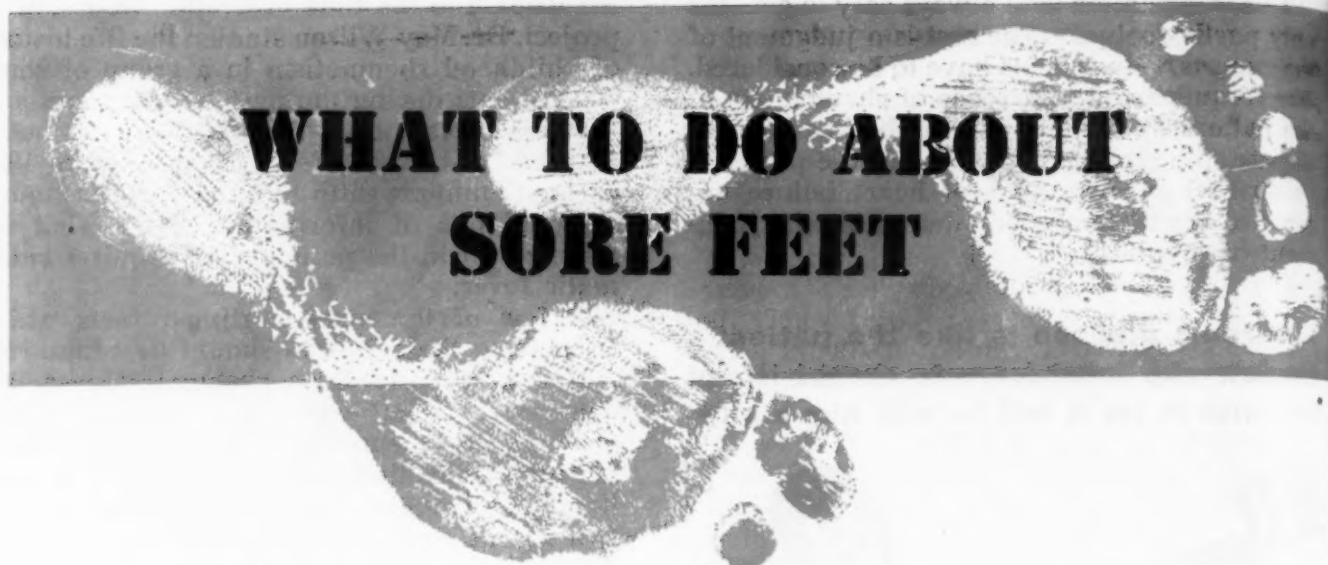
If a child develops an attack of rheumatic fever, the chances are high that he will develop another. Among 100 children who develop an attack of rheumatic fever, 75 are likely to develop a second attack, 32 a third attack, 20 a fourth attack and 12 of them five or more attacks.

The recurrences are most common up to adolescence. It is useful to bear in mind the fact that the number of recurrences of rheumatism after the age of 20 is small. If damage is not already severe by that time, the outlook for the patient is very favorable.

When we look at all the patients with rheumatic heart disease, we find few among them above the age of 50. In the 45 year old group, one finds only about 16 per cent of all rheumatic heart disease. The rest have died before then.

How long a person with rheumatic fever is likely to survive, however, depends on many factors. When the disease starts in childhood, the chance of reaching the age of 30 is only one out of five. That is, of 100 children with rheumatic heart disease, only twenty will be alive at the age of 30 and only five at 45. Among 100 patients who develop the disease in adolescence, fifty-five will reach the age of 30 and twenty-one will reach the age of 45 or more. When the disease begins still later, as many as half the patients may survive the age of 45. Thus in deciding the question of how long a particular rheumatic patient is likely to live, one of the first questions we ask is, "How long has he had the disease and when did it start?"

The younger the child is when the disease begins, the more severe the infection is likely to be and the shorter the duration of life, although even mild infection in early childhood is unfavorable. (Continued on page 450)



By **HENRY I. SCHEER**

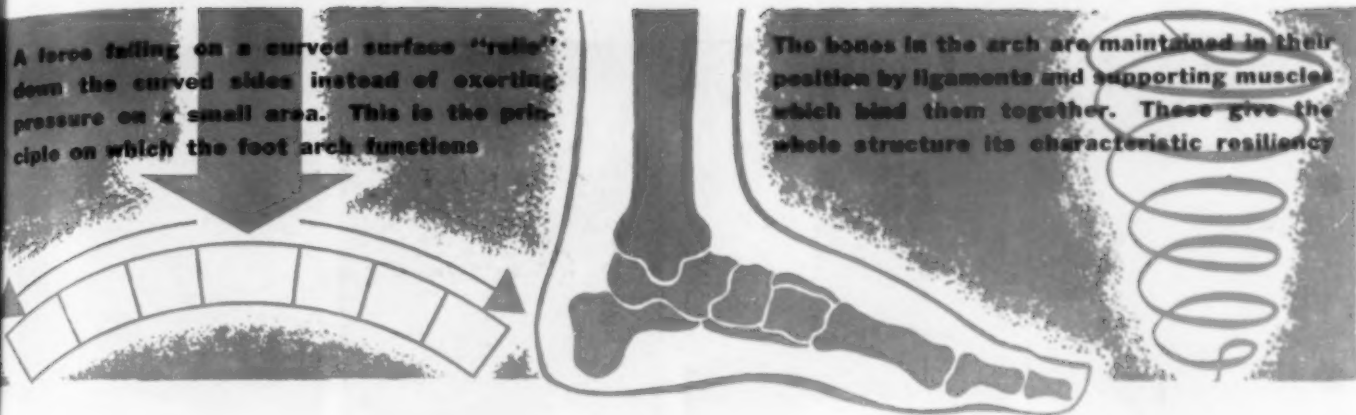
THE FOOT has three functions. First it is a pedestal supporting the weight above. Second, it sends that weight through space, as in walking, running, dancing, swimming and climbing. Finally, it is to a certain extent a shock absorber—cushioning jolts and jars so that they are not transmitted to the spine and the abdomen, where they can do much harm.

At first thought, one wonders how comparatively small structures like the feet can support the weight of the entire body. Actually, this is possible because the bones are arranged in two arches—one from the back to the forward part of the foot, called the longitudinal arch, and the other running across the front from the inner to the outer side, called the transverse or metatarsal arch. The mechanical principle involved in the efficiency of the arch is that when a force falls on a curved surface it “rolls” down the curved sides, just as a column of water would do, instead of concentrating pressure on a small area, as would be the case if the surface were flat. Thus the force striking the arched area is dispersed and exerts less pressure than it would if it were flat.

The arch is maintained in its position by ligaments, most of which are inelastic structures binding the bones together. Since these are inelastic, continued strain or weight bearing stretches them, and they remain in the stretched position. If the arch depended entirely on the ligaments for its curves it would ultimately flatten out. But supporting muscle structures which are elastic contract and relax, maintaining the integrity of the arches and giving the step resiliency and grace which are characteristically lacking in the flat-footed person.

The muscles of the calf of the leg come around the back and sides of the ankle to enter the sole of the foot and are attached to the bones in such a manner that by contracting and relaxing they can increase or diminish the height of the arch. This action can be compared to that of the archer's bow and string: The tighter he pulls the string, the deeper the arch. There is also present in the foot an elastic plate called the “spring ligament” which, together with the arched surfaces and supporting muscles, absorbs jars much as do the springs of a mattress or the shock absorbers of an automobile. Muscle is always in a state of contraction, which is called “tonus.” If the muscle tone is diminished, the muscle tends to become flabby and fails to support the arch. The ligaments then bear the brunt of the task. Being inelastic, they stretch, and the arch which they are supposed to hold together flattens out. In a desperate effort to overcome this condition the muscle is unable to contract normally and goes into a spasm which causes pain. The most frequent sites of pain in flat feet are therefore the calf of the leg and the sole of the foot.

Any condition which diminishes the power of leg muscles, especially those of the calf, will cause flat feet. For example, prolonged disuse of leg muscles will make the muscles smaller and weaker. Glandular disturbances, especially in children with obesity and heavily padded hips, are also important factors. These fat youngsters with prominent breasts, high hips and infantile genitals are frequently victims of flat feet. People engaged in occupations which require constant standing also acquire flat feet, but it occurs less often in those who walk or move about, because then muscles are



in action and become stronger. The toxins or poisons of infectious diseases like pneumonia, influenza, throat infections, typhoid and especially malaria, acting directly on leg muscles, may contribute. Hereditary predisposition to flat feet is also a factor. Improper methods of walking or standing with toes pointing out commonly cause defective longitudinal arches.

The chief symptoms of flat feet are painful, aching, tired feet—worse on standing than on walking. Arch supports and corrective shoes are not a cure. They are merely props holding up a disabled structure and preventing it from toppling. The fundamental cause and the consequent flat feet persist regardless of supports and shoes. Although this condition in the adult is often advanced sufficiently to resist treatment, a great deal can be accomplished by patiently and conscientiously adhering to instructions.

The best answer, if possible, is to begin treatment in early childhood. Proper exercises to strengthen leg muscles, correction of poor habits of walking and standing, treatment of glandular or any other constitutional disorder affecting leg muscle tone and education of those who are obese or engaged in occupations straining the legs and feet are all necessary remedial steps.

More distressing and painful than flat feet is the condition caused by a dropped metatarsal arch, which is that part of the foot corresponding roughly to the region of the knuckles in the back of the hand. When this happens the nerves lying immediately beneath are pinched or irritated, causing excruciating pain. This is a not uncommon experience in people who come home after dancing in highheeled shoes. They take off their shoes and seek relief by grasping the fore part of the foot in their hands and manipulating it so that it is lifted up and away from the nerves on which it presses.

The cause of this condition may be anything which throws body weight on the front of the

foot, where it normally does not belong. The metatarsal arch is flattened and pinches the nerves below. High heels are one of the chief offenders. Sitting at a desk or a table with the heels off the floor and only the toes touching is a frequent cause of this painful affliction. This can sometimes become severe enough to incapacitate and render one useless for any work requiring use of the feet. As in flat feet, the cure of this condition is in early detection of bad habits of sitting, standing and walking, and improper footwear. Metatarsal pads inside the shoes and lifts on the sole of the shoe may raise the arch but will not cure the trouble.

Man first put a device on the soles of his feet to protect them from the uneven ground he walked on. Later, a foot covering was attached to the soles to keep the feet warm. Then he added a heel because he found that it facilitated walking. Walking usually begins with a slight forward thrust of the body, which is aided by the heel. Thus the purpose of a shoe is to provide protection from the uneven earth's surface over which we move, a foot cover serving the same purpose as a glove for the hand in cold weather, and a heel to aid walking. The heel need not be more than an inch or an inch and a half high for this purpose.

Unfortunately, man's vanity has perverted the true function of footwear. The shoe no longer conforms to the outline of the foot; the penalty is deformed feet with diminished usefulness. Toes overlap or are bent, causing "hammer toe," or the big toe, instead of being straight, is bent in the direction of the outer side of the foot, causing bunions. In these disabilities, too, prevention lies in early and intelligent care and education.

Occasionally, a painful foot affliction due to disease of the blood vessels is found in old people and not infrequently in those of middle age. The diameter of the vessels in the feet is diminished through thickening of the walls so that the amount of (Continued on page 479)



McGonegal's Hands

By R. M. CUNNINGHAM JR.

AMONG the thousands of helping hands offered by a grateful nation to the crippled war veterans who are returning home to begin life anew, the most helpful by far are McGonegal's hands. And this is astonishing, because McGonegal has no hands!

"Don't let needless embarrassment rob you of the excellent opportunities which await you," Uncle Sam tells war heroes who come back minus arms or legs lost in the service of their country. This is part of the practical, fact-finding advice included in a pamphlet which



has just been prepared by the War Department for distribution to limbless veterans. But Army doctors know that men who have lost limbs don't want advice. They want proof. So the pamphlet also gives them dramatic evidence that men with properly designed and fitted limbs can do most of the things normal men can do. McGonegal's hands are the evidence.

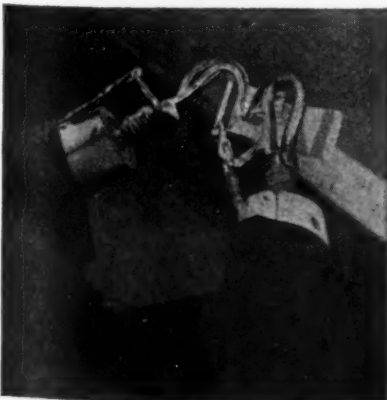
Charles C. McGonegal lost both his hands in the last war when a hand grenade he was about to throw against German machine gunners attacking his outpost exploded prematurely. Then, as now, the government furnished artificial limbs for its war amputees. McGonegal was afraid that the unsightly "working hooks" used by some men without hands would make him an object of pity. People would stare. Instead, he chose wooden hands—heavy and clumsy, perhaps, but at least they *looked* like hands. With gloves on, McGonegal thought, no one would notice the difference.

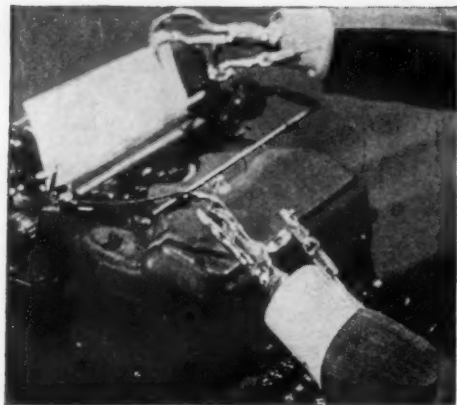
One hot afternoon, McGonegal was walking down the main street of a small midwest town. He saw a man staring at his hands, then overheard him say to his wife, "Look at that farmer! Got himself a new outfit and has to show off his kid gloves, even though it is the middle of summer!"

Then and there, McGonegal decided to put aside his pride of appearance and take pride in accomplishment instead. He switched from good-looking hands to functional hooks. Then he went to work. "I would stay up at home after the others had gone to bed," McGonegal says. "Until two or three o'clock in the morning, I would practice using knives, forks, spoons, coffee cups—drinking from a glass, putting on my coat and taking it off again, buttoning buttons, opening and closing doors. When I got tired I would relax by sitting at a desk practicing penmanship."

Today, as pictures in "Helpful Hints to Those Who Have Lost Limbs," the War Department pamphlet, vividly demonstrate, McGonegal can take justifiable pride in his many accomplishments. (For example, he flies his own plane and has over 300 solo hours to his credit. He can rope steers.)

Pictured here in sequence for the newly amputated soldier are the countless details of McGonegal's daily life as a salesman. He is shown doing the little, manual tasks which most people do without thinking but which become insurmountable obstacles to living for men without hands. Using cleverly contrived wire hooks which can be clamped together by the action of arm and shoulder muscles to





simulate the function of fingers and opposing thumb, McGonegal shaves and combs his hair. He pulls up his socks and *ties his shoe-laces!* He buttons his vest. At breakfast, big, raw-boned McGonegal tackles bacon and eggs and coffee—he takes sugar and cream—with gusto.

Like men with hands of their own, McGonegal likes a cigaret after breakfast. The pictures show him taking one out of the package in his vest pocket and putting it in his mouth. Army doctors think the next sequence will accomplish wonders for soldiers who lie in hospital beds wondering how life without limbs can ever be supportable. It shows McGonegal picking up a book of paper matches, *tearing one off and striking it*, then lighting up and inhaling.

In the pictures, McGonegal puts on his hat and coat and drives to work. He uses the telephone. He writes his daily report. He blows his nose. He takes a hand at bridge; shoots a game of pool with his cronies. He lives.

Without McGonegal's example, the advice of Army doctors as set forth in the pamphlet might be taken as gratuitous bombast: "The process of learning to use your new arm should be progressive. You didn't learn to write overnight; neither will similar skilful arts with the artificial hand be performed immediately. Let pride in your accomplishments with your new limb lead you on to further attainments and full realization of your ambitions."

With McGonegal's hands pointing the way, these words—familiar to all who have needed "rehabilitation"—take on new, vibrant meaning.

"Helpful Hints" also lists a thousand and one facts which are desperately needed by men without arms or legs. It describes the services (physical care during the period of adjustment and after, vocational training, care and replacement of broken or worn out limbs) the men are entitled to receive from the government

and, practically, lists the veterans' administration headquarters in each state where these services and others may be applied for. It answers all the questions which may arise to worry or shake the confidence of the limbless: Why the stump shrinks and jerks at first. How the stump should be "exercised" and cared for to get maximum comfort. What to do about "phantom pain"—the weird sensation reported by those who have lost a limb but can still feel movements, or even definite throbs and pains, in the missing member. Such sensations are caused by raw, severed nerve endings which telegraph impulses to the brain just as they did when the limb was intact, Army doctors explain in simple, reassuring language. As the nerve ends heal, these sensations diminish and ultimately disappear.

Here, too, are comfort and encouragement for the legless as well as the armless: "You can't just buckle on your new leg and walk away. You must educate your stump and yourself to proper walking habits. You will receive instructions on how to walk. Follow these instructions exactly so as not to develop bad walking habits."

At first, the new limb will feel like a foreign object, the men are warned. "It is heavy and awkward," the pamphlet points out. But—"gradually it will become comfortable. Eventually it will become a part of you—something you will put on and off like a shoe, a glove, a pair of glasses or bridgework."

These words will be forgotten as soon as the need for them is past. Years from now, hundreds of this war's limbless veterans will go about the daily business of earning a living and being useful members of society, the painful periods of adjustment to new ways of doing things mercifully receding in memory. For most of them, doubts and fears will be long forgotten.

But they'll always remember McGonegal's helping hands!

Our Public Health Challenge

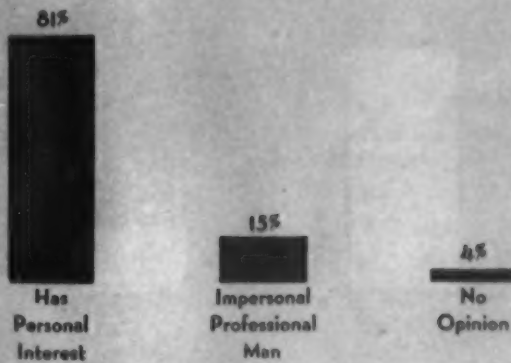
By **GORDON B. DUNCAN**

HOW DOES the average American feel about his doctor? Is he satisfied with the quality, costs and availability of medical care in general? What does he think about medical care plans to meet the costs of prolonged or unusual illness? Does he feel that reforms are in order to guarantee adequate and nationwide medical attention for every one? If so, does he favor compulsory health insurance?

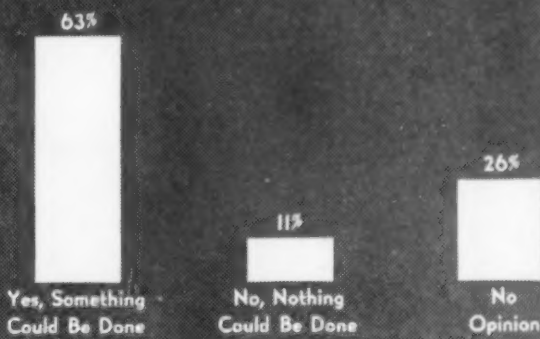
These questions have long been subject to debate and discussion in groups ranging from congressional committees to drug store "town halls." At long last, the answers have been dug out—from war workers, farmers, business men, housewives, and men and women in all walks of life, through a survey recently completed by the largest research institution of its kind in the country.

The survey, launched last July by Opinion Research Corporation and sponsored by the National Physicians Committee, shows that America is alert to the problem of public health even in the confusion of wartime. The survey

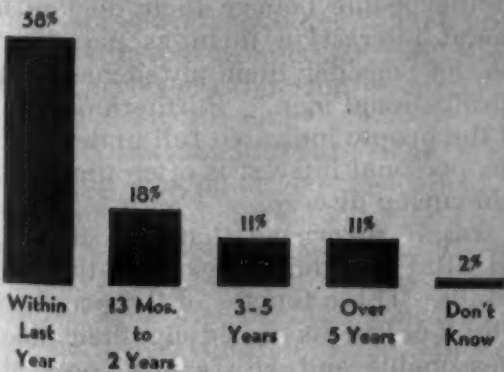
Do you think of your doctor as an impersonal professional man, or would you say he has a personal interest in you and your welfare?



Do you think anything might be done to make it easier for people to pay doctor or hospital bills?

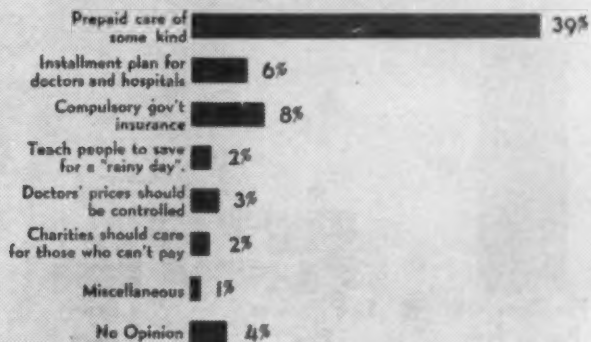


When was the last time you saw a doctor?



What especially do you think might be done to make it easier for people to pay doctor or hospital bills?

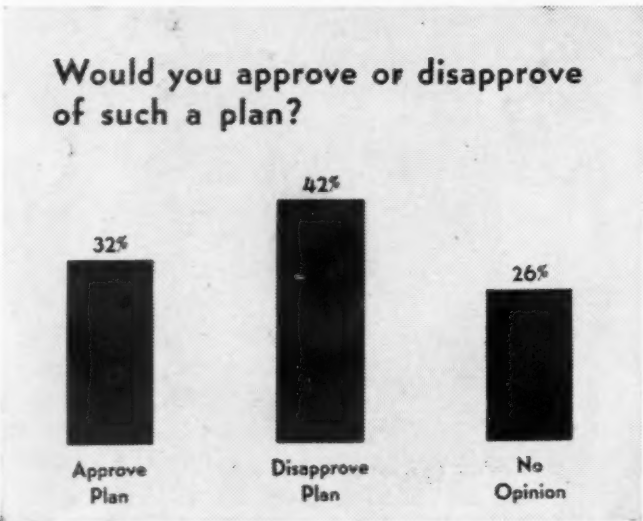
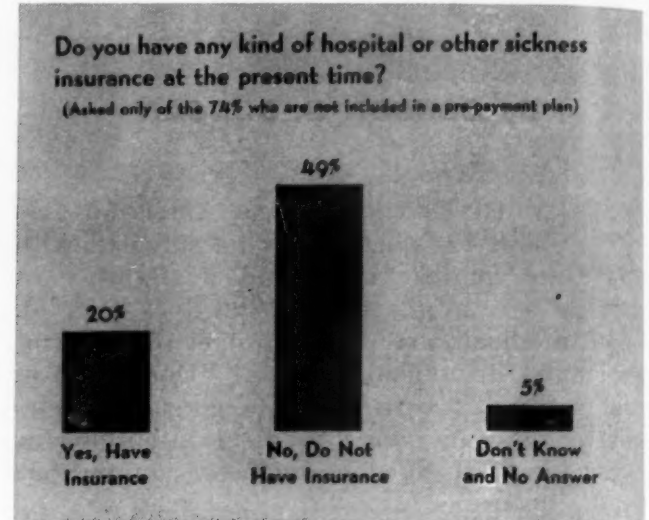
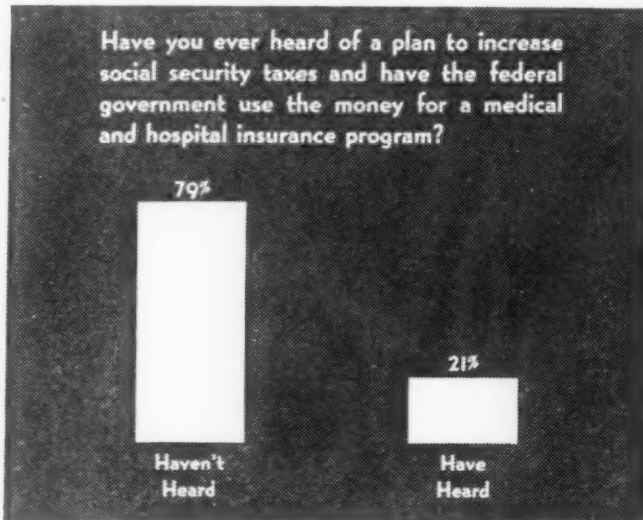
(Total something might be done—63%)



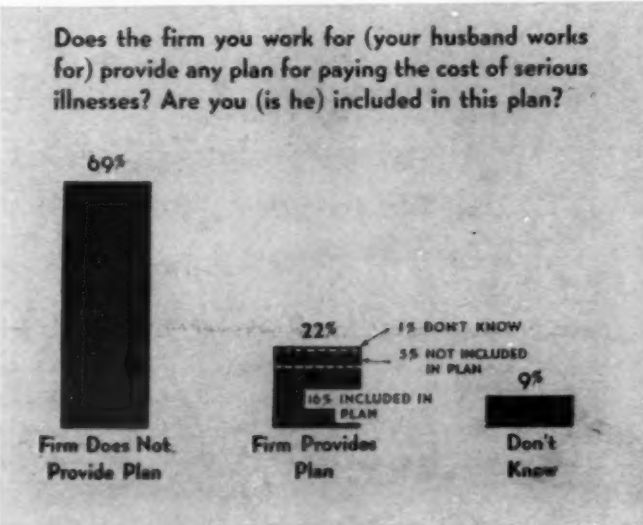
reveals that: (1) the doctor holds a high—the highest—place in the esteem of the public; (2) the average person is satisfied with the quality and availability of medical care; *but*—(3) most people feel that economical group medical practice methods must be provided to meet the costs of prolonged or unusual illness. Further, they prefer today's popular medical care and group hospitalization plans

to the current proposal for government controlled medical care and hospitalization. However, most people realize that current plans must be expanded rapidly to meet the needs of the nation, both as to benefits and areas served.

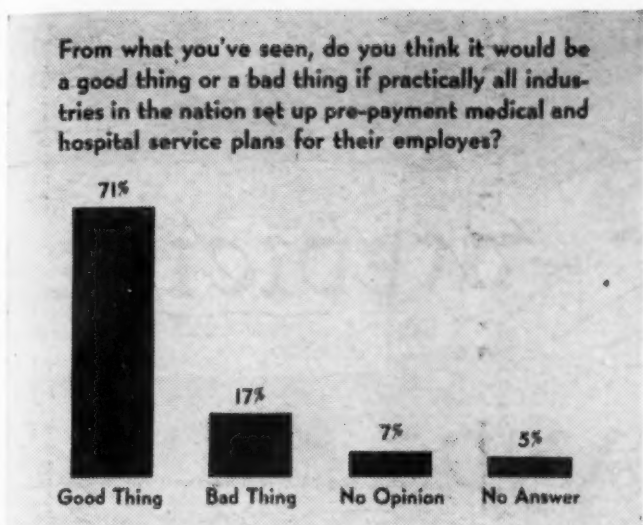
The first conclusion is hardly startling. Tributes to the American doctor are legion. They are found in literature, in newspapers,



books and magazines, and in the everyday conversation of common people. Autobiographies of country doctors and of their more academic professional brothers have made best-seller lists and have paid lasting tribute to medical science and to the profession as a whole. Novelists have chosen the doctor to represent the epitome of personal integrity and community devotion. Thus it was not surprising that the survey showed the American people to be conscious of the tremendous forward strides taken by medical science in recent years and of the need for intelligent cooperation between the layman and the doctor in assuring physical health for every one. (In 1942 the United States had the highest general level of health and the lowest death rate ever known for a like number of people under similar conditions.) The survey reveals that 81 per cent of the people believe their doctors have a personal interest in them as persons, and they do not consider their physicians "impersonal professional men." Furthermore, 63 per cent of the people indicated full understanding that this personal interest is often the deciding factor in curing disease.



Nor was it surprising that the survey unearthed little complaint regarding the size of doctor bills. Three fourths of the people indicated that payments asked by their doctors were reasonable and satisfactory; only about one-fourth said a trip to the doctor's office had



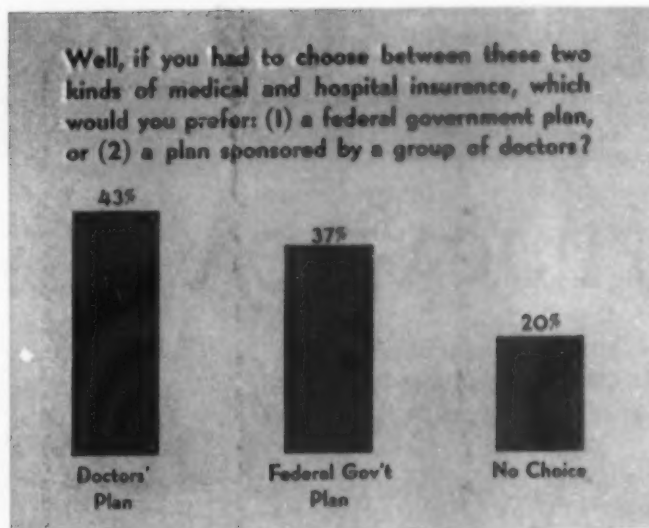
ever been postponed because of considerations of possible cost.

Of much greater significance was the conclusion that the public realizes the need for providing easy methods for meeting the costs of prolonged or serious illness. Most people admitted that at times they experienced difficulty in meeting bills for such emergencies. Although expansion of various current prepayment facilities could meet every demand for medical care and hospitalization, the general public knows about these facilities only in a general way and does not know how to make the best possible use of them.

For proof, the survey showed that 22 per cent of all people employed by American industry work for firms which provide some plan for paying the costs of serious illness; 74 per cent of all workers in all industry are not included in group prepayment plans. Yet the majority of people interviewed indicated they would like to participate in some such plan.

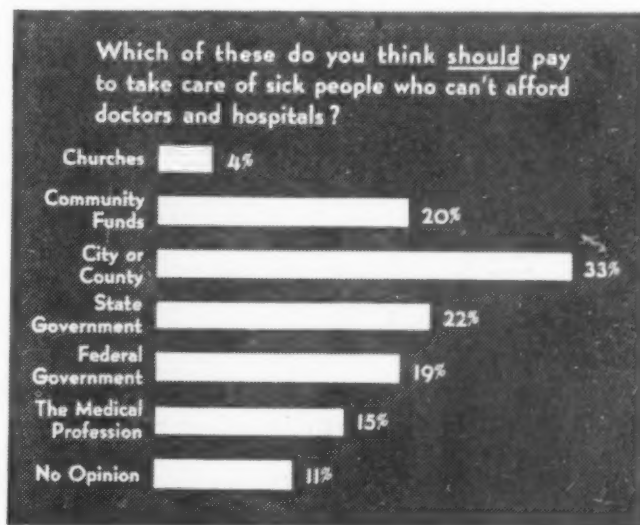
Today's thousands of prepayment medical care and hospitalization programs, successfully operating, furnish prepayment facilities to an estimated 25 million people, or about one fifth of our population. There are only about one million employees protected by doctor sponsored medical care plans in companies, although commercial insurance coverage for the same benefits includes a much greater total enrolment. No wonder Mr. and Mrs. John Q. Public urge the expansion of current facilities to meet every demand!

This response indicates that the issue is becoming a popular one instead of the technical one it has been for so long. The response lies in with the opinion of Dr. E. H. Cary of Dallas, Tex., chairman of the National Physicians Committee for the Extension of Medical Service. According to him, "The only real security for the profession and the only real



safeguard for the public lies in an understanding by the people of the methods, achievements and values that have resulted through private distribution of medical care."

Let's take a look at a few typical examples of voluntary company or employee doctor sponsored medical service plans. Eli Lilly and Company has set up a plan, for instance, which pays the total cost of insurance—disability, life, surgical care and hospitalization—for all employees and their dependents. Then there is the plan of Endicott-Johnson Corporation, in Johnson City, N. Y., whereby the firm owns and operates three clinics and a hospital and furnishes free to each worker and all dependents all medical care and hospitalization. Abbott Laboratories' plan pays a substantial part of the insurance cost—disability, life, surgical care and hospitalization—for all employees and dependents. In Henry Kaiser's huge scale plan for workers in his shipyards and other plants, there are clinics and hospitals, company owned and operated, with medical care and hospitalization furnished for all employees but not (Continued on page 445)





By **JOHN L. C. GOFFIN**

WITHOUT FANFARE or banners a development of profound significance is gaining momentum in the schools of America. In the evolution of our public school system, health education is playing a vital part. Physicians, dentists and nurses are being brought into the classroom, not merely to find such evils as decayed teeth, malnutrition and warped personalities, but to keep them from occurring at all. This they are accomplishing through education of children, teachers and parents. They realize the obvious but frequently neglected truth that the children of today are the parents of tomorrow.

In this dynamic approach to health as the first objective of education the medical and dental professions are vastly aided by the progressive movement. The traditional idea of a school that many of us remember is a rather uninviting building in which children sat uncomfortably in rows of floor-anchored seats at stationary, skimpy desks. They had a text-book for each subject, and they read a certain number of pages each day and recited the contents to the teacher, who corrected all deviations from the circumscribed views of the author. The facts thus learned by rote were often unrelated to each other and bore little or no relation to the problems of the child as an individual. "Knowledge was power." After several years spent in storing up facts, the youngster was supposed to be educated—equipped to steer his way successfully among the reefs and shoals of this complex world. It was much like giving a child all the complicated parts of a fine watch and expecting him to put them together and make the watch run.

Visit a modern, progressive classroom and what do you find? It is lighter, airier, more

attractive. Instead of rigid, back-torturing seats and desks you see tables, chairs, workbenches, materials. It is a child's workroom. The children are working singly or in groups. Some are reading, some writing, some making things, others discussing what they have made or plan to make. The teacher moves unobtrusively about, suggesting, helping, correcting, learning. There are many more books than in the old classroom, but they are used for reference, for inspiration, for guidance. They are read critically, not memorized. An educational radio program may be coming into the classroom, or a motion picture may be unfolding itself on the screen. A doctor, dentist, nurse, supervisor or civic leader may be addressing the group. These children are learning about the world they live in today, finding out how it differs from the world of yesterday and preparing themselves to live in the world of tomorrow. They are learning about themselves and their adjustments to the real world of work and play.

HOW does medicine fit into this picture? To understand its contribution it will be necessary to review briefly the evolution of the school health program. Half a century ago, in the United States, doctors and nurses were brought into the schools of many large cities to curb epidemics of disease. In addition to signs of contagious diseases, the physicians found numerous physical defects that were keeping children from learning and cutting down their attendance at school. They found children who were failing because they couldn't see, children who were pronounced stupid because they couldn't hear. They found malnourished, tuberculous, epileptic, antisocial children who were expected to make the same "marks" as the sturdy, robust and well cared for, and

who were punished or ignored if they didn't. The doctors and nurses informed the parents of these things and saw that family physicians, dentists, specialists and free clinics were consulted. The world war draft brought home to the public the deplorable results of a nation's neglect of the health of its youth.

EDUCATIONAL authorities became convinced that if the state could compel children to be educated it thereby incurred the responsibility of keeping them fit to profit by their education. To care for the health needs of school children a number of special services sprang up, some preventive, others remedial. To mention only a few: tuberculin testing, toxoid for diphtheria, vaccination against smallpox, audiometer tests for the hard of hearing, posture correction classes, nutrition classes with free milk for the indigent, school clinics for the handicapped, dental clinics, telebinocular examinations for poor readers, mental hygiene clinics and psychologists for behavior problems, and many others were made available.

All these services were a tremendous gain. They vastly benefited the health of hundreds of thousands of children. Only recently have we realized that even they were not getting at the root of the trouble. It became increasingly apparent that many of the physical and mental disabilities of children were preventable. The doctors reasoned: Why keep on correcting the mistakes of the past? Why not avoid such mistakes in the future? Why not educate the children themselves to prevent disease?

SUCH a program required vision, imagination—and time. Education is a slow process; the results are not immediately apparent. Besides, who should undertake such a program? Doctors and nurses—all too few at best—had their hands full taking care of present and pressing needs. Teachers were overloaded with subjects—the “musts” of education. Besides, they were not trained to teach functional health. Perfunctory instruction was given on the evils of alcohol and tobacco. Anatomy and physiology were taught as a dry litany of the bones and muscles and organs, without much relation to the health problems of daily life. And, anyway, physical education was teaching the value of strong muscles and presumably building such character traits as sportsmanship, leadership and courage. Meanwhile boys and girls were graduating from high school with a smattering of poorly digested facts about the world they lived in, a complete and cheerful ignorance of their bodies, with atrocious health habits and with no clearly defined program to guide them through a bewildering and perilous world.

Many state boards of education made rules requiring that all school children be examined periodically every year or so. With hundreds of thousands of children and a handful of physicians, this meant hurried, superficial examinations and inadequate follow-through for correction. It soon became clear that some method of selection must be found to give the doctors time for more thorough examinations and for conferences with parents and teachers. The only group large enough to do this selecting was the teachers. So the doctors and nurses had a new job—to train teachers to screen out those children who really needed medical treatment and advice.

BY the year 1936 the principle of having school children examined and advised by school physicians had become firmly established. Boston had 70 school physicians and 67 nurses; Detroit had 100 physicians and 135 nurses; Philadelphia, 107 physicians and 100 nurses; Los Angeles, 45 physicians and 90 nurses, also 20 school dentists. Los Angeles was one of the few cities with full time physicians; most of the physicians in other school systems were employed for only one to three hours a day.

Today the school physician is a specialist in health education and child growth and development. His viewpoint is different from that of the practitioner. He needs to know health as well as disease. Perfect health is relatively rare; most children possess at least minor deviations from the ideal. The school physician gradually builds in his mind a composite picture of the healthy child and strives to approximate all the children in his care to this ideal. The physician who has worked in the schools and who has helped teachers solve countless behavior problems learns to judge how the educational machinery can best be adjusted to the varying temperaments and capacities of growing children. He has learned to talk to the older children, to explain the mysteries of diet, the causes of flat feet, the care of the eyes. This is direct and practical health education. But the doctor has time only to discuss the immediate problem presented by the pupil, and he sees the child at rare intervals. Health education must be a continuous process. Knowledge must be translated into action—this is functional teaching. Unless the facts received by children result in better health habits and more intelligent attitudes and deeds they are not actually being educated at all.

DOCTORS, nurses, physical education and science teachers were among the first to recognize this fact. Since then health material has been creeping into (Continued on page 462)

**Birthdays are important to youngsters—
they should not be overlooked just because
Mother works and can't arrange a party**



Child Care Center

By HAZEL L. SIMMONS

TODAY is Freddie's birthday, and what does a mother do when a small boy has a birthday? Why, she bakes a cake, doesn't she? So we baked a cake and covered it with white frosting and decorated it with pink roses and put candles on it, six candles because Freddie is 6 years old. We had ice cream too, and baked potatoes with meat loaf for supper, because Freddie specially likes meat loaf.

The New York Mills Child Care Center is like that. Because our children are absent from their homes for nearly all their waking hours, this is about all the home they know.

With mother working long hours, it is not humanly possible for her to give her children the attention they need. There are bound to be irregular, hurriedly prepared meals, snacks and inadequate lunches. Often, the homes and yards must be kept unnaturally quiet, with consequent curtailed activities, because father or, in some cases, mother has been working at night and must sleep during the day.

Besides, many homes are dreary places today. This is especially true in New York Mills, where from a community of four thou-

sand people, over six hundred boys have entered service.

"My mother, she always hollers when we make noise and she cries every time when we're eating," Joey tells us. "She's worrying about my brother," he adds in explanation. It is little people who come from homes like this that need cheer as well as food and care, cheer and as much happiness as it is possible to give them.

We wish we could say our unit of extended school service, our home, is in a roomy, rambling house with sunny living room and fireplaces and cozy corners and a bath (we do need a real bath!), but that isn't possible at the present time, so Mr. Quinn, principal of the New York Mills High School, has had one of the most pleasant rooms in the high school building redecorated for us. The floors have been sanded and polished, the walls painted a soft, creamy white, the blackboards covered with cork and the windows shaded by colorful curtains. All the desks and benches have been replaced by heavy maple tables and chairs of various sizes, while over in the corner rest

cots are arranged for the small people who need a nap in the afternoon.

At present we eat in the school cafeteria, but we have our own menu and our own table. It is quite a privilege to sit at our table, because we get second helpings and other special attention, such as:

"Can't we have ginger bread for supper?" Janey asks, and the cook changes the menu from apple sauce and cookies to ginger bread and jello.

One of the most important members of our personnel is the cook. We have been fortunate in having a lady with us who loves children, mothers them and often lets them help. The only way we were able to keep one restless boy interested in coming to the center last summer was to allow him to work in the kitchen, where he did everything from peeling potatoes to serving at the table.

Do the children improve in health? With the good, nourishing food we serve to take the place of the more or less continuous stream of cheap candy, potato chips, ice cream cones and pop that the child left on his own usually eats, with daily rest periods, with outdoor play and sports to build an appetite, the rapid increase in weight is often surprising. And

with improvement in health invariably comes improvement in conduct and attitude. Cheerful, happy youngsters replace whiney, irritable little people after a few weeks or sometimes even days at the center.

How does it happen that a small, upstate town like New York Mills has this unit of extended school service, while many larger places are still without any facilities for the care of the children when mothers are working? New York Mills was the first village in the state, we believe, to establish a child care center. New York Mills has as principal of its high school Mr. J. W. Quinn, a man who feels keenly his responsibility to all the children of the community, a responsibility that reaches out beyond the usual school day and the usual school year. He took time out from all his regular duties, first to survey the community to learn whether child care service was needed, to hold endless conferences with federal representatives and with members of the state education department, to attend meetings of the local war council, as well as the various social agencies in the community.

Then, early last summer, he applied for funds made available by the Lanham Act. On June 21, the present (Continued on page 464)

Scene in the child care center at New York Mills, N. Y. Furnishings, activities and supervision follow the practices accepted in up to date schools. Note "projects" on blackboard





Convalescence Can Be Fun

By LOUISE DINWIDDIE

SO YOU are convalescing in bed! You would prefer being a participant in a walkathon, no doubt, but you are going to discover with pleased amazement what an adventure this is going to be for you. Life in bed can be astoundingly interesting. There are really endless things for you besides crumbs on the counterpane. You may idle without conscience and let hours go lazily by with complete justification. There is no need to hurry and get things done. There is no need to do anything at all but get well. That is all that is expected of you. It will be a long time before you will have things so soft again.

Sickness is a fundamental factor in everyday life and one of the grave consequences of being mortal. At present you are another victim; you are temporarily retired from active duty. Obviously you have a body that is not quite up to things; it is in shop for repair. Once going again, the body will be the same self-starting and self-stopping apparatus it always was, reconditioned. Now you need to acquire a pleasant sense of timelessness. Lie alone and

like it. Time is definitely unimportant, and you will find that it comes as fast as it goes.

There is a lot to be said for the bed. Pleasant and profitable days may be spent there. Bed days are restoratives for mental and bodily vigor. Time spent lying low is often a blessing in disguise. Never does the world seem so simple as from a bed. The affairs and events of yesterday that sent you about in a whirl of energy and worry are now inconsequential. You have only one problem, to get well, and you should be glad you were not sick enough to have that problem eliminated. Everything that could possibly upset you is kept away from you; if you want to be alone, people leave you alone. If you want to be amused, friends and relatives will go to any extreme to produce a laugh or an appreciative glance from you. You are ruler in a small realm of room, and your authority knows no boundaries. Never will it be so again.

You need not mention expenses, either. Doctors and medicines are expensive, but balanced with the high cost of pleasurable, everyday



You'll find that friends who visit you will go to any extreme to make you laugh



Wear the fanciest bed garments you can find, then primp and make yourself attractive

living, they do not top the latter by a great margin. You can even save money by being in bed; there is the wear on your wardrobe alone, not to mention sundries and luxuries that are now presented to you, but which are your purchases when you are up and on your own.

You are getting relaxation and rest from what might have been a humdrum existence. After your rest in bed you will have a new perspective. There are peace and a new outlook outside any bedroom window. Yes, a lot can be said for the bed.



You'll have time to try your hand at writing

Now I have satisfactory qualifications for discussing convalescence in bed. I have convalesced from the measles, mumps and chickenpox. I once was bitten by a mad dog and was given the Pasteur treatment, which is taken lying down. Then came nervous indigestion, concerning which it is difficult to say when it began, and when, if ever, it will end. For this I endured six weeks of hospitalization. Three weeks of my life were spent in a college infirmary for acidosis; several weeks for grip. For six weeks I was between the sheets in a hospital after an acute appendicitis. I



It's a wonderful chance to ride your hobby

shall give casual mention to tooth extractions that require operating-room technic and several bed days thereafter, also various days in bed for slight indispositions. Then came the wreck! I was a passenger in an automobile which collided with a coal truck. At this time I received seven fractures and two months of hospitalization on a fracture bed. My last episode was hospital treatment for the removal of a kidney stone; this included many days in bed. I may add that I have looked at the ceiling many times from the hard metal slab of

an x-ray table and from the cool, leather board of the examining room.

This is your time for being in bed. You must make it an important and memorable occasion. Give the family a rest, now that dark days are behind you. Common sense in a convalescent's outlook makes existence more pleasant for the whole household. Plan your day; outline a simple routine for bed life. In the lives of the great there are few split seconds. If you are inclined toward the write side, you might record your day and possibly have material for later publication.



—and all the time you want for needed rest

Begin each day as a new one. You have all the time in the world. Make yourself attractive in your best bed jacket; powder your nose; do up your hair and sing for your breakfast. It is worth a song—this luxury you have always wanted—breakfast in bed! This is a feast denied all your working sisters. A well propped back, an attractive tray for your fastidious appetite and time out for munching are yours. You may remark that you are not hungry. You don't want anything to eat. Of course you don't; convalescents rarely do. You are tired of the old phrases, trite but true,



Exercise in bed—if the doctor lets you

"You must eat to gain your strength," and "To build yourself, eat." The family and doctor chorus, "You *must* eat!" And so you must.

There is a close relationship between food and temperament. The average mind is stubborn; it is not always noble; it is wayward, prejudiced and unreasonable at times, and yet it is capable of being utterly charming. Your mind should be relaxed at meals. Worry and restlessness can interfere seriously with the proper digestion of food, and your chances for leaving the bed quickly (Continued on page 470)



BODY MECHANICS

How to Save Energy

IT'S OBVIOUS that five women are stronger than one woman. It's equally obvious that five sets of muscles are stronger than one set of muscles. Correct body mechanics is the art of distributing the strain of a job over several sets of muscles instead of putting the whole load on a few. It is the art of using the strongest muscles of the body instead of straining the weaker members. As a result, you do your job more efficiently. You use up less energy. You avoid injury. And you feel fresher and happier at the end of a hard day.

We laugh at the idea of a person scratching her right ear with her left hand. Why? Because it seems a foolish waste of energy—a hard way to do an easy thing.

Yet many of us distort our bodies, employ wrong muscles and approach simple tasks in complex ways that would also be laughable if they were not so costly in energy.

It is not hard to understand the simple principles underlying the exercises that follow. They are based on practical common sense.

Neither is it hard to have them become fixed habits. At first you may be conscious of them as you do your work. But after a while, you will employ the principles of correct body mechanics without realizing it—in everything you do, whether it is making a bed or rising from a chair.

On the following pages you see correct ways of lifting, pushing, pulling, falling and crawling. Study these pictures and you discover that when the body does these things efficiently, it does them gracefully as well. The two—efficiency and grace—are inseparable.



LIFTING. Lifting should be done by means of leg muscles rather than back muscles. To lift a heavy object, bend the knees, getting the body as much underneath the object as possible.



CARRYING. Place the carried object in such a manner that the weight is centered over the whole body. If possible this should be on the shoulders with the back nearly straight.



This is the eighth in a series of articles from the WAC Field Manual of Physical Training. Designed to condition women drawn from civilian life for

the strenuous physical exertions of WAC service, the exercises presented here will help bring physical fitness to men and women in all walks of life.

—The Editor.

Learn the Right Way to Do These Everyday Jobs!



PULLING. Pulling should be accomplished by bracing the feet firmly, bending the knees, rounding the back, grasping the object firmly and letting the body weight do most of the actual pulling.

PUSHING. In pushing any heavy object make use of the whole body weight. Lean the body from the ankles, brace the feet and push against the ground. This may be done by facing the object and pushing with the arms. Or with the right or left shoulder against the object and the body facing sideways and pushing with shoulder. Or with back against object pushing with upper back.



JUMPING. When jumping from a height land on the toes, bending the knees to absorb the shock. The knees should be bent in proportion to the height from which the jump is made. Study pictures.

Body Mechanics Are Important in First Aid



TWO-MAN CARRY. Kneel at side of victim. Grasp shoulders of other bearer around victim's back. Grasp wrist of other bearer under victim's thighs. Rise slowly from ground, using the legs to push.

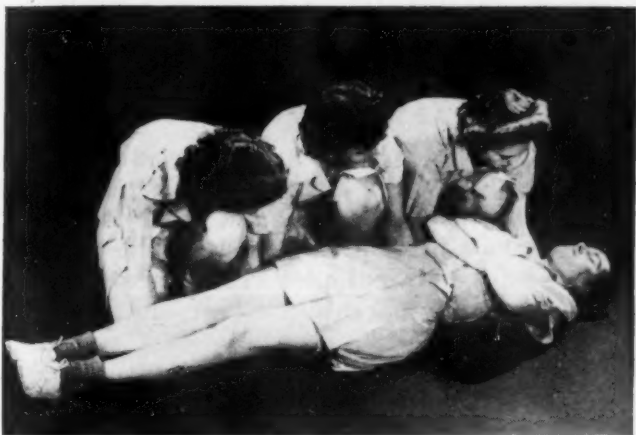


CARRYING VICTIM BY EXTREMITIES. The bearer at the head lifts the victim by the shoulders until she is able to clasp her hands around her chest. The bearer at the feet places her hands around and under the victim's knees. At the signal, "Lift" from the head bearer, the victim is lifted and carried. In rising, the bearers must be sure to lift themselves by means of leg muscles.





FIREMAN'S DRAG. Victim's hands are tied or clasped around bearer's neck. Bearer raises victim's head and shoulders off ground and progresses by crawling, dragging victim on ground.



FOUR-MAN LIFT. The bearer at the shoulders puts one arm under the victim's head, neck and shoulders and the other under the upper part of the victim's back. The second bearer has one arm under the victim's back and the other under the thighs. The third bearer places one arm under the knees and the other under the ankles. The fourth bearer takes position on the opposite side of the victim at the hips and is not shown here. All bearers lift together and place victim on their knees. All rise together (top of page, right) and carry victim in horizontal position. Keep step in walking.



FALLING AND CRAWLING



FALLING. With right foot placed forward and toes turned inward, fall forward, landing on the outside of the right knee and thigh to break the fall. As body falls toward ground, break the rest of
(Continued on page 463)

MEDICAL AID FOR MARINES

Medical officers and hospital aids learn how to be "tough but tender" in this U. S. Marine Corps school

By CORP. HAROLD A. BREARD, U.S.M.C.

BLAZING beachheads and jungle warfare are no novelty to Lejeune-trained Navy medical officers and hospital corpsmen. To them, landing operations in the Pacific are like a first night to actors—the same thing they've rehearsed, but on a grander scale.

The Medical Field Service School at Camp Lejeune, N. C., is now graduating approximately 45 medical officers and 400 to 600 corpsmen every six weeks. The students are fully rehearsed in the role they are destined to play with Marine Corps combat units. While attending the school, doctors and corpsmen dress like Marines, live like Marines and train like Marines. When they've completed the course, they're as tough as Marines.

They know what to expect and what to do when they reach the theater of operations. They know how to guard against diseases and how to care for the sick and wounded. They're familiar with fox-holes, slit trenches and bivouacs. They learn that malaria-bearing mosquitoes and other tropical insects are responsible for more casualties than Jap bullets. They're taught to make the jungle as healthy as possible under the most adverse conditions.

Within limits, fighters have only themselves to guard against battle hazards. But medical officers and corpsmen have to look out for the wounded as well as themselves. This requires tenderness in addition to toughness. Temperamental tenderness. Physical toughness. They possess both. In their ability to take what the enemy dishes out, they're rugged. But in dealing with the wounded they're solicitous and sympathetic. They devote as much care to the injured as the situation permits.

The heroism and devotion to duty of medical officers and hospital corpsmen have been recounted by those best qualified to relate them—Marines who owe their lives to the daring courage and medical skill of Navy doctors and first aid men.

At the Medical Field Service School, headed from its inception by Captain Don S. Knowlton, (MC) USNR, camp surgeon, the students divide their time almost equally between classroom work and related field problems. The latter have a twofold purpose—to teach and to toughen. A comprehensive list of subjects is

taught in the classrooms. Then the lessons learned from textbooks, lectures and conferences are applied to problems in the field, under the supervision of veterans of both Atlantic and Pacific operations—Guadalcanal, Tulagi, Gavutu, Savo, Florida Islands, Munda and Rendova.

The students receive a thorough grounding in first aid, field sanitation, medical unit administration and tactics, prevention and treatment of malaria and other tropical diseases and surgical improvisations in the field. Furthermore, they're given a working knowledge of Marine Corps organization and its relationship with Navy medical personnel.

Classroom texts, lectures and conferences are supplemented with visual aids—diagrams, illustrations, photographs, projection slides, microscopes, sand table miniatures and technical and informational movies. The technical films deal with the mission of doctors and corpsmen in the war zone. It is the purpose of the informational pictures to acquaint the students with general developments of warfare.

The training medical officers and corpsmen receive at the Medical Field Service School equips them to serve anywhere along the chain established from front line to rear for evacuating wounded. They know what to do if attached to a company on the firing line or to a battalion aid station in the forward area. They know how to handle a collecting section; how to establish and operate a clearing station and field hospital.

Their field work includes plenty of hiking; overnight compass marches; close order drill; establishment and operation of field hospitals under canvas; organization of evacuation chains to move wounded out of battle areas to hospital ships or planes and treatment required along the line by various types of casualties; construction of underground dressing stations and operating rooms and practice in their use; rubber boat evacuation of injured from shore to ship; and a complete problem involving cargo net practice, landing from Higgins boats, beach rendezvous, organization of evacuation chain from rendezvous area to front lines and establishment of all medical units on a newly attacked beachhead.

The landing problem is carried out with realism. The students hit the beach amidst demolitions and with aircraft "strafing" them. Smoke screens are laid (Continued on page 444)



Students at the Medical Field during a practice landing at Service School "hit the beach" Camp Lejeune, N. C.



These students are at the entrance of a hillside dugout medical station built during the training of corpsmen



Training of Navy doctors includes practice in and hospital corpsmen using gas masks



Navy medical officers conduct an "operation" in the underground operating tent built for field training. At right, they "learn the ropes"



By **MIRIAM ZELLER GROSS**

"**P**ERHAPS I'd better tell you something about this boy before he comes," the surgeon said. "He was brought here to Walter Reed Hospital from the Pacific war zone a short time ago. Better than a fifth of his skull was gone, and an extensive portion of injured brain tissue had to be removed. We operated about ten days ago."

"Here I am, Doctor," and with that the 20 year old veteran walked into the room, pale but smiling.

It was startling to realize that this man now walking about had less than two weeks previously lost a large portion of his skull. Before I could recover from my amazement, the surgeon reached up and deftly removed the bandage which began just below the eyebrows at the bridge of the boy's nose and went back to cover the rest of his head.

Instead of the remnants of the ghastly wound you dreaded to see there appeared what looked

will eventually take the place of all metals in surgery; these men are not quite so enthusiastic. But most surgeons who have used tantalum claim that it is probably better fitted for surgery than other metals. Metals have been used by surgeons for over four hundred years, during which gold, silver, steel, aluminum, magnesium, brass and other metals have replaced or united various parts of the body.

Most civilian surgeons have yet to give their appraisal of tantalum, as until recently tantalum wires and plates have been available only for Army and Navy surgeons. But whether or not the metal proves as important an addition to the surgeon's kit as its more enthusiastic supporters believe, the story of tantalum is well worth telling.

Tantalum, a soft, bluish-gray metal and element, was discovered nearly one hundred and fifty years ago in Stockholm by Anders Gustaf Ekeberg, an instructor at Upsala College. After years of false tries and discouraging failures, he finally succeeded in separating this new element from tantalite, columbite, samarskite and other rare metals. Feeling that he had been

TANTALUM Repairs War Wounds

to be a perfectly normal head with closely cropped brown hair. The only telltale mark was a fine red line which extended across the temples just beneath the eyebrows, ran back above the ears and disappeared at the hair line.

"Wrinkle up your forehead, Son," the surgeon said, and the boy slowly puckered his brow. "The wrinkle is slightly one-sided yet," said the surgeon, "but that will be all right shortly." He ran his fingers gently over the boy's head and across his temples.

"Run your hand over his head," he said, turning to me. "You will not be able to tell where the tantalum plate begins or stops." So, fearfully, I put my hand on the boy's head. And it *was* true that neither by touch nor appearance was there any indication of a wound which in 1918 would have meant certain death before the boy could have been taken from the scene of battle.

"Of course the scar is still there," the surgeon said, "but before long, we will freshen up the edges, and even the scar will disappear. Then, Son, there won't be a thing to show that you have been wounded."

Many surgeons will tell you that tantalum is a great scientific achievement and an important event in surgery. On the other hand there are some surgeons who believe that a substance which will be absorbed within the body

tantalized at times beyond endurance, he decided to name the new substance "tantalum"—after Tantalus, the mythological, tortured son of Zeus.

Tantalum is mined in the Black Hills of South Dakota, in Greenland and Western Australia, and is isolated from other metals by the action of sodium on sodium tantalofluoride. A small amount was produced in Germany from 1903 until the beginning of World War I, but it was not produced to any extent until 1922, when the Fansteel Metallurgical Corporation, of Chicago, made it available for industrial purposes. Its first use was in electrical units. Later, other commercial uses were developed.

But only since war days has tantalum assumed any importance in surgery. About four years ago surgeons John C. Burch and H. M. Carney of Vanderbilt University first used the metal in fracture work, believing that its commercial applications indicated it had a nonirritating quality not possessed by other metals. The men were well pleased with their results, and Dr. Gerald Burke of Vancouver soon reported equally good results. Within the last two years, surgical research and the developments of industrial laboratories have extended the use of tantalum into so many branches of surgery that today there are few parts of the body which are not being repaired with tantalum wire, plates or foil.

Tantalum plates, as in the case described at Walter Reed Hospital, the Army Medical Center in Washington, D. C., are used to replace lost skull tissue. Because the metal is soft and easily molded it is also used to replace other lost tissues. For example, there is Johnny J. who lost an ear in a submarine incident. Johnny now has a tantalum ear, and the flesh from his thigh grafted over it adheres so closely to the nonirritating tantalum base that when you see Johnny you cannot tell which ear is tantalum.



Richie Studio

Here the operator is shown at a special machine which attaches stainless steel needles to wire sutures made of tantalum, the new surgical metal

Facial paralysis is being relieved by small, saddle-shaped pieces of tantalum and tantalum wire used to pull the corners of the mouth to a normal position. People who undergo this operation are particularly grateful, as it stops the unpleasant drooling which goes with facial paralysis—and helps these people once again to look like their neighbors. Cleft palates also are being corrected by the help of tantalum plates and wire. Artificial dentures can then be fitted—and again the patients are grateful because they can look like other human beings.

The treatment of skull and nerve injuries

improved steadily during World War I. Each year from 1914 to 1918 marked surgical advances lowering the death rate from injuries which usually interfere with the great telegraph and general communication system of the human body. Many of the early complications were caused by infections, now controlled by the use of sulfa drugs and penicillin. Thus thousands of skull, nerve and bone cases which would have been fatal in the last war are being brought to this country for secondary healing and reconstruction.

A brain injury is serious at any time. If sensation, action or reasoning centers are damaged they cannot be repaired. But unless important brain centers are damaged, the brain can stand a tremendous loss of tissue without serious after-effects, provided hemorrhage, infection and shock can be controlled and adequate secondary treatment is given. The control of initial repair processes is largely up to our overseas surgeons. After the initial stage, all brain and nerve injury cases are returned to this country for further care. There are between 150 and 200 topnotch neurosurgeons available today, whereas we had hardly a dozen in 1917, and their accomplishments, plus general surgical advances, offer hope for head and nerve injuries beyond the realm of possibility even five years ago.

The secondary repair work of Army and Navy surgeons in this country includes removing old scar tissue and constructing artificial parts. The neurosurgeon has a difficult problem when he attempts to make up for lost tissues, and the problem is especially involved in caring for head injuries. Lost portions must be replaced with a substance which will protect without irritating the delicate brain centers, and the formation of scar tissue should be held to a minimum. Neurosurgeons believe, although the fact has not been completely established as yet, that the adhesions which occur when scar tissue is formed may be responsible for such late complications of head injuries as paralysis, stuttering and other speech disorders, epilepsy and various types of insanity.

Surgeons Robert Pundenz and Guy L. Odom, then of Montreal (Pundenz is now at the U. S. Navy Hospital at Bethesda, Md.) reviewed the experiences of other surgeons about two years ago. These men found that celluloid, parchment, mica and cellophane, oils, rubber tissue and various metals had been used and found to be unsatisfactory in repairing skull defects, so they experimented with peritoneum, human membranes obtained from cesarean sections, beef membranes, polyvinyl alcohol films and tantalum. In comparing the materials, the surgeons *(Continued on page 478)*

By **SAMUEL F. HARBY**

"Hello?—Hello doctor! This is Mrs. King. Please come over right away. I've just pulled a tick off my little girl's neck, and I'm scared to death. Aren't they the things that carry Rocky Mountain spotted fever? Yes—Yes? Oh my goodness! How great is the immediate danger?—"



Transmitted by wood ticks, Rocky Mountain spotted fever is a dangerous disease which is likely to prevail in spring and summer. Learn these rules—be careful!

THIS FRANTIC telephone call gives you a glimpse of the anguish many mothers will suffer during the season now beginning, when ticks are out. A little information about these pests and the disease they carry is therefore timely and important.

Dermacentor andersoni and *variabilis* are two varieties of the parasite commonly called the wood tick. Before it attaches itself to an animal host and feeds, it is about the size of a match head, but during the feeding process it becomes engorged with blood and enlarges to five or six times normal size. *Andersoni* was discovered to be the carrier of Rocky Mountain spotted fever in Montana twenty-four years ago. We have learned more recently that the eastern dog tick, *variabilis*, also carries the disease—but usually a milder form. The virulent as well as the mild strain, however, now occurs frequently in the East, especially in the states of Virginia and Maryland. Wherever there are ticks, citizens of the locality should be on the alert for Rocky Mountain spotted fever and understand thoroughly the means which exist for preventing it.

Mrs. King, whose distress call opens this article, became very much interested in Rocky Mountain spotted fever as a result of her experience. She obtained information from the United States Public Health Service, from her doctor and other local sources until she had amassed considerable data on the subject. The following facts are her minimum list of things parents should know about ticks and spotted fever to protect their children and spare themselves anxiety such as she suffered:

1. Rocky Mountain spotted fever was formerly believed to be confined to the Rocky Mountain area. It has now spread all over the United States.

2. It is transmitted by the bite of a tick, which must itself be infected with the disease. These ticks live in woods and are most numerous in the states of Montana, Idaho, Maryland and Virginia.

3. Only about one in two hundred of the ticks is so infected.

4. There is a vaccine which will immunize against spotted fever—but little can be done to treat the disease once it is contracted.

5. The vaccine is not recommended for general use. But if you live in a woody section of a tick-infested area, you should have this protection. Surveyors, farmers, woodsmen and others whose work exposes them to frequent tick bites should by all means be vaccinated.

6. Your doctor or public health officer can obtain the vaccine for you from the United States Public Health Service, which maintains a laboratory at Hamilton, Mont., for the "tick-lish" business of raising, infecting and trans-



Hikers, campers, picnickers and others who frequent the woods may be exposed to tick bites. Parents of

children who go in the woods must take precautions, then examine children and remove ticks to be safe

forming four million ticks a year into this life-preserving fluid. The vaccine is provided without charge for those who need it.

7. Along the Eastern seaboard, children and women are more apt to take the disease than men. The ticks are gentle, and their presence may be unnoticed even when they are feeding. So parents should go over their children—and themselves—thoroughly after being in the woods and remove ticks before they become attached. Fortunately, they are in no hurry to feed and usually take about two hours to settle down to this business, so there is ample time to remove them.

8. You must, of course, know what you are looking for and how to remove and dispose of them properly. Find and study a picture of the wood tick. The unfed tick resembles a bed bug, and the engorged tick looks like a kidney bean. Once fastened on, they are difficult to remove. Grip them with metal tweezers just behind the neck and pull slowly but steadily until they let loose. Avoid breaking off the head of the tick, which will remain imbedded in the skin and cause irritation, if not infection.

9. The best way to dispose of the ticks you remove is to burn them or flush them down the toilet.

10. Do not try to take them off with your bare fingers, as there have been cases on record of the disease being transmitted in this fashion. If a tick should break in your fingers,

wash them immediately with alcohol, or, if this is not available, strong soap and water.

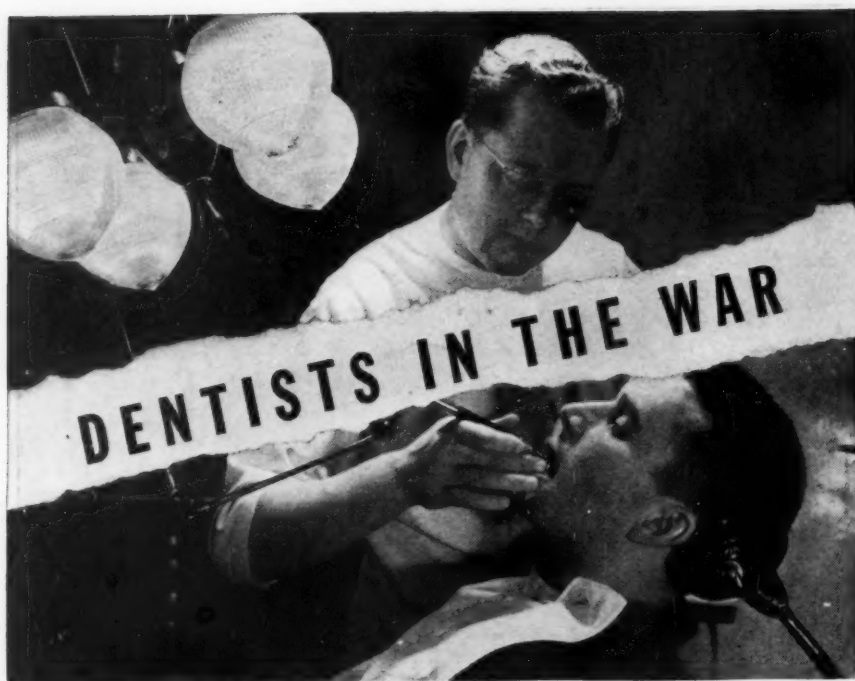
11. Dogs are immune to spotted fever, but they bring ticks into the house and thus into contact with members of the family who would not otherwise be exposed. A dog can pick up as many as fifty ticks daily. If such a hazard exists in your household, your dog should be thoroughly inspected every evening and "de-ticked" with tweezers.

12. Ordinarily, if you stay out of woods and shrubbery, there will be almost no opportunity for ticks to get on you.

13. The vaccine must be taken a month or so in advance of exposure to be useful. For children, it is a 1 cc. intramuscular injection, followed a week later by a similar dose. For adults, the dosage is doubled. There is practically no discomforting reaction, and the immunity lasts about twelve months.

The vaccine is the product of years of careful research in which at least five scientists gave their lives—so that you might have protection against this deadly disease. Rocky Mountain spotted fever has by no means been conquered, but its ravages have been significantly reduced; and there is prevention—if you will take the trouble to be immunized.

The seasons for ticks are spring and summer. As soon as the weather turns warm, they begin to appear. It is a time for caution and vigilance. Don't underestimate this enemy!



By J. PAUL O'BRIEN

PERHAPS he once had offices downtown in your city, or on the main street of a farm village—the one the soldiers call “the man behind the drill.” Little has been said about him in this war. The infantry, most soldiers will tell you, is still the “queen of battles”; the airmen are the glamor boys, and the doctors, too, have deservedly enough received considerable credit for their fight against death and disease, often under battle conditions. But the dentist donned his uniform and went off quietly to camp, and almost nothing has been written of him.

Just how important a role the dentist is playing in the war is revealed in a “fact sheet” recently published by the Army. Engagements, the Army says, may well have been won or lost by the condition of a soldier's teeth. More than forty divisions, or 500,000 men, have remained on active duty because of the Army Dental Corps, the Army estimates. Every day, 94,000 soldiers see their army dentist. Each inductee needs an average of 1.5 teeth filled; among every 100 men, there will be 60 extractions; approximately 13 soldiers in every 1,000 require full sets of false teeth, and at least 15 per cent require plates to permit them to eat properly.

The Army has a way of describing the dentist's importance to the fighting man: “A soldier can't put off the visit ‘until tomorrow.’ If his teeth ache, he can't eat; if he can't eat, he can't fight. If he can't fight, our combat strength is reduced—and we need every man

who is fit for duty.” The army dentist's job is to help conserve fighting strength, and he is doing it not only over dental chairs back at advanced or base hospitals but also right in the front line.

At the training camps, the dentist is taught to become a doctor-soldier. He must skim hurdles, run obstacle courses, crawl under barbed wire under an overhead curtain of live bullets and participate in long marches. He goes with the ski troops and shares the same risks they do, for teeth can be troublesome in frigid cold. He may learn how to “hit the silk” with the paratroops or to land on enemy shores with amphibian forces. Jumping dentists were among the first to land in Sicily.

In combat areas, the dentist may travel the front lines on foot, giving emergency dental treatment. His special dental kit enables him to fill and pull teeth and even work with surgical teams on fractured or maimed jaws. Or he may be assigned to a mobile dental laboratory, which obviates the necessity of sending combat troops many miles to the rear for tooth repairs.

While all soldiers are given periodic dental examinations, fliers are objects of special interest because of the activities of “dental gremlins”—the little pests that have a particular effect on an airman's teeth. The same centrifugal force which pulls blood away from the pilot's brain also affects the blood of the pulp in the teeth in like manner. Some fliers experience intense pain at high altitudes in teeth which have metal fillings, and the danger in such cases is quite apparent. A report from the South Pacific revealed that a pilot was unable to keep formation at a given altitude because of a severe toothache caused by the height. Some men are subject to toothache at lower atmospheric pressures.

But the dentist is playing just as important a role in the rehabilitation of wounded men as he is doing in combat. Great advances have been made in dental science, opening new horizons to men who suffer the loss of part of the face or jaw. Today, the dentist is a vital member of the maxillo-facial surgery team. One example—with a happy ending—involves a private hit by a shell fragment during the North African landings, losing most of his lower jaw. Given pre- (Continued on page 479)



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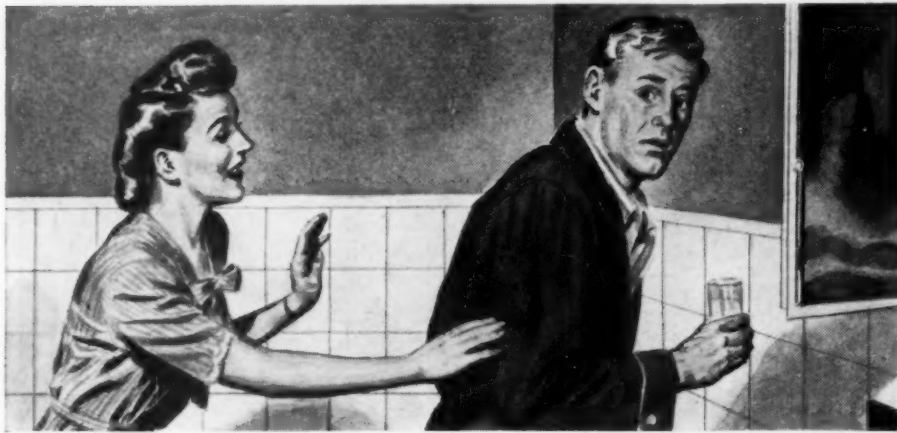
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Stomach-ache or Appendicitis?

—it's not for you to say



DON'T DO THIS: If you have an unusual abdominal pain—don't take laxatives or home remedies; take no food or liquids, except water.

Forego your usual daily business. Don't rub the spot that hurts, or apply an ice bag or hot-water bag.

WHY NOT? Your appendix may be inflamed. Food or laxatives might rupture the appendix and spread infection

—the cause of most deaths in appendicitis. These complications are four times as frequent among those who have taken laxatives.

Physical exertion or massaging may be dangerous if the appendix is inflamed. Complete rest may help prevent serious complications. Heat or cold might kill the pain and give you the mistaken idea that the attack has passed.



DO THIS: If the pain is a puzzling and persistent one, if it's accompanied by nausea or vomiting, call a doctor and rest in bed until he comes.

WHY? Only a doctor is qualified to say whether you have appendicitis. He may want to take one or more blood-cell counts, watch your temperature, and wait for pain to localize. Chances

are it *isn't* appendicitis. If it is, and the doctor advises an operation, quick action may save life, time, and money.

Prompt attention, together with the recent advances in medical science, have reduced by half the deaths from appendicitis in the past few years.

Send for Metropolitan's free booklet, 64-Z, entitled, "Appendicitis."

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Medical Aid for Marines

(Continued from page 436)

down, a gas attack is simulated and field communications by telephone and radio are established.

In addition to the regular course in medical field service, the school offers a four-week amphibious corps course for medical personnel destined to serve with supporting Navy forces in ship-to-shore operations and two one-week courses, one in disease prevention for officers and enlisted men of the Marine Corps and Seabees and the other in sanitation and personal hygiene for PT boat officers.

The Medical Field Service School, one of two of its kind maintained by the Navy, has experienced tremendous expansion. The service of the school to the Marine Corps in supplying field-trained medical officers and hospital corpsmen for combat units has increased in direct proportion to its growth. In addition to its other functions, it serves as the East Coast receiving station for all Navy medical personnel assigned to the Fleet Marine Force.

Medical officers come to the school from internships and civilian life, from aboard ship, from recruiting duty and from naval hospitals and dispensaries all over the country; corpsmen come from ship and shore stations, receiving ships and hospital corps schools.

The principal task with interns and civilian physicians is demonstrating that they're not just doctors in uniform, that they have to deal with surgical cases with a minimum of instruments and equipment and a maximum of speed and ingenuity, to improvise, to utilize to the fullest what they find available. To quote Captain Knowlton, who served as the assistant division surgeon of the First Marine Division in the Solomons: "The student officer is tactfully taught the difference between the management of the sick and wounded at the front and the civilian relationship of physician and patient. He is shown that he must render adequate, prompt and efficient treatment in the forward areas, but that he must not waste time and effort on any one casualty to the neglect of many others."

Marines ship out of Camp Lejeune to fight the Japs. So do medical officers and hospital corpsmen—indirectly. But they also have a broader mission—to meet and conquer humanity's oldest and most treacherous foes, disease and death.

Our Public Health Challenge

(Continued from page 425)

for their dependents. Most of Mr. Kaiser's workers have joined the voluntary plans, at a cost of about \$30 a year per worker—or 7 cents a day.

Besides such company or employee medical service plans, there are statewide, physician sponsored medical care plans, local physician backed plans, the various benefits offered by the rapidly expanding Blue Cross hospitalization plans, union sponsored plans, cooperative groups, private clinics and ordinary insurance against the hazards of unusual sickness and surgical costs by individual or group policies. Typical of the insurance fraternity's recognition of the problem is the recent organization of the American Health Insurance Corporation, financed as a subsidiary of Commercial Credit Company. This organization is expected to offer surgical benefits to the 15 million people who subscribe to the Blue Cross hospitalization plans all over the nation.

More and more reliable medical plans are rapidly becoming available to tenants of public housing projects, too. Among the most extensive is that serving some 50,000 persons living in California projects. Called the California Physicians Service, this prepaid medical care program—approved by the state medical society—gives full medical care, surgery and hospitalization for \$5 a month for a family of three or more, \$4 for a married couple and \$2.50 for a single person. Doctors, nurses and specialists handle the medical needs of 2,000 to 3,000 persons. Participation is voluntary, and subscribers pay fees to their housing manager along with their rent.

In general, those are the kinds of plans approved by people in the United States, as evidenced in the public opinion survey. Most people do not want the national government involved in providing medical care, because they consider it an economic as well as a medical care problem, with the responsibility that of medicine, business and industry.

People already protected by prepayment medical care and hospitalization plans enthusiastically endorse them, and so do their doctors. Spot surveys of laymen and doctors in various regions where

such programs operate indicate that 90 per cent of the people participating in such plans approve them, and 85 per cent believe they are better off than their neighbors who have no such opportunities. Among doctors in areas where such plans are in operation, 76 per cent say they are as well off, and that the people are better off, through operation of the plans. Furthermore, 71 per cent of these doctors believe that all industries in the nation should operate prepayment medical and hospital service plans for their employees.

Even the average American who is not yet covered by prepayment protection feels that compulsory government insurance will not provide a satisfactory solution to his medical care problems. He does not favor a 6 per cent payroll deduction from wages for government medical care. Mind you, he does not even want the federal government to provide medical care for the indigent. Here is conclusive evidence that although the American people may not understand the "whys and wherefores," they are deeply conscious of, and appraise the value of, individualized service in the effectiveness of medical care. They want and will demand "freedom of choice" when they or members of their families are ill. They believe this choice would be limited and restricted by any effort of the federal government attempting to provide medical care.

In making this comprehensive survey, the National Physicians Committee offered evidence that the medical profession considers socialized medicine one of the gravest threats to proper care and advancement of medicine. The results of the survey would indicate that most Americans share the doctors' fears.

A chain is no stronger than its weakest link, according to the well worn adage. In the case of American medicine, the weak spot has been an exclusive emphasis on its prime function—scientific improvement and technical effectiveness. Until comparatively recent times there has been a woeful lack of public awareness of the advantages offered under the present system of medical care. The National Physicians Committee is urging the American public to familiarize itself with the issue.



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*Patent applied for.





By MARVIN JONES

I HAVE recently had two interesting conversations. One was with a Russian general who had fought at Stalingrad. He told me some amazing stories about that historic battle. But to me one of the most significant things he said was that the Germans in their retreat abandoned huge stores of munitions of every sort, great fields of tanks and trucks, enormous supplies of oil and equipment of every kind—except food. They never abandoned food.

In the War Food Administration, we have always held that food is as important as any other war material. Perhaps we are biased because food is our field. But here was a general, a military man, who had seen one of the greatest demonstrations in all history of the force and value of arms, assuring me of the importance of food compared to other war materials! This general had observed the decision our enemy made when pressed by the desperation of the greatest defeat yet suffered on any front. He saw the enemy in that critical moment abandon everything else—except food.

That was one of the conversations I had recently. The other was with a man who told me of a dinner party he had attended recently in a midwest state. There were eighty-one people present. After the meal, the edible waste food scraped from their plates was weighed. It added up to 17 pounds. That was food we abandoned.

We have always abandoned some food in America. While that is not pardonable, particularly in time of

This recent radio address by the War Food Administrator is reprinted in HYGEIA through the courtesy of the United States Department of Agriculture.—Ed.

war, it is understandable. Historically, we have been so blessed among the peoples of the earth with such abundance of food that we have naturally become somewhat careless and wasteful. But while that is understandable, no one will forgive waste of food in time of war.

I have been surprised by the figures on food waste which have been collected by superintendents of refuse collection departments in various cities, by sanitary engineers, by home economists and by others, whose reports indicate that here in America we have been actually wasting at least 20 per cent of all the food produced in this country! That means 1 pound of food out of every 5 is wasted. This in turn means that two hours out of every ten hour day that our farmers, processors and other food people work are lost. We can't afford that lost time. We can't afford that lost effort, and we can't afford that lost food, particularly while the war lasts. It is only because of our enormous supply of food that we have been able to survive such a loss thus far. We must remind ourselves that while our ability to survive in the face of such loss is a measure of our wealth, it is also at this time, a measure of our responsibility.

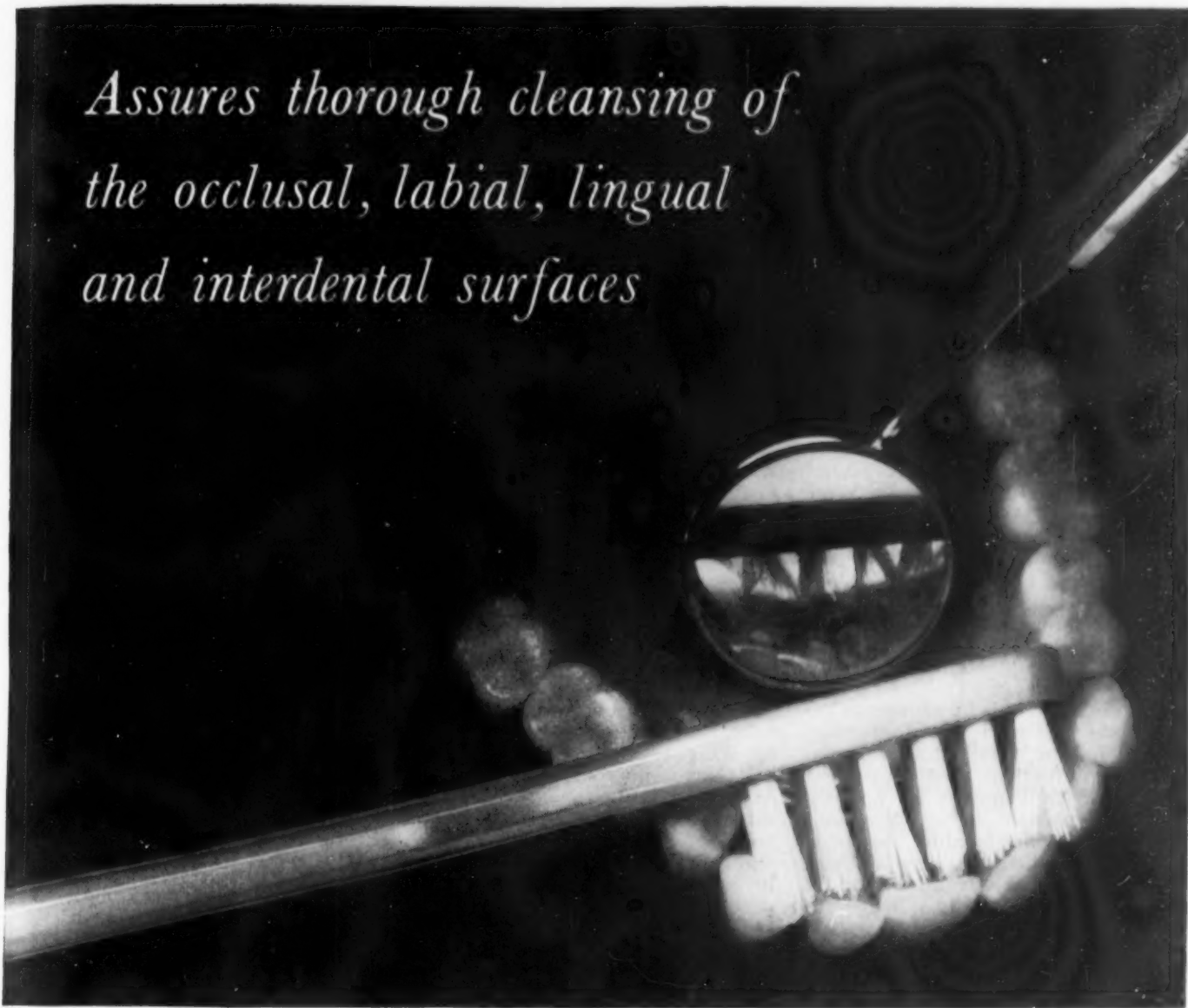
Of course, it is difficult to know exactly how much food is really wasted. The estimate I have given of one fifth of our total supply may be too high, although some careful studies indicate that the waste may be even higher. The American Public Works Association, which is a private organization of superintendents of refuse departments, has analyzed garbage collections in cities which separate their food

refuse from other types of household collections. Their reports show that 255 pounds of food per person is thrown away annually. This means that 15 per cent of the food which goes into the home is wasted. The report also shows that 100 pounds of the food discarded is strictly edible. This means that an average family throws away 400 pounds of good food annually.

Recently, 37 colleges from different states made a study of food waste, and their figures showed a food waste, including that from the kitchen and table, of from one half to two thirds of a pound of food per student per day. There are other evidences of the tremendous amount of food that is being lost, but let us save time right now by accepting the evidence that is already in as sufficient proof that this waste, whatever it is, should not continue.

Now what can we do about it? Who is chiefly responsible for this waste? I am sure that few of us, even in peacetime, deliberately throw good food away. Most housewives pride themselves on their frugality. Perhaps many of you are thinking, "This food waste is terrible—but he isn't talking to me. I certainly don't waste any in my home." I am happy to agree that in many homes everything is being done that can be done to prevent the loss of food. But the evidence shows that of all the food that goes into American kitchens, about 1 pound out of every 7 is dumped out for the garbage man to carry away. Some of this comes from serving too much on the plate, some from improper storage of the food at home and some from other causes. For instance, it is estimated that

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Proper brushing technique, essential as a protection against health-menacing tooth decay, is made easier with Dr. West's Miracle-Tuft Oro. For the Oro's small brushhead and straight brushing plane assure that *all* surfaces are reached. And the Oro "EXTON" brand bristling—sturdy, non-wilt bristles last longer—do a more thorough job of tooth cleansing. Your personal test of this truly modern brush is invited.



● Brushhead is 1¼ inches long. Bristle tufts are widely spaced in two rows of six tufts each and properly trimmed for interproximal brushing.

ORO 50¢

24 million bushels of potatoes are normally peeled away and discarded in a single year.

In England, where food is a precious thing, people are asked not to serve jam or butter on the plate but to put it directly on the bread, because otherwise a little sticks to the plate to be washed down the sink. It is a penal offense in England to waste food. According to the American Bakers' Association the average person in this country eats about 2 pounds of bread per week. If each American home wastes only one slice of bread a week—and that is not very much—the total would amount to 2 million loaves of bread each week. If each person in the United States had saved only one-half ounce of butter per week, it would have furnished our entire army last year. In wartime, it may not be such bad etiquette to pick up the bones in your fingers in order to get all the meat there is, and to tip the soup bowl to get the last spoonful, and to sop up the gravy on the plate with a piece of bread, and to squeeze the grapefruit dry!

The housewife is by no means the only one who wastes food. Studies conducted by retail store associations show that at least 3 per cent of all foods handled in grocery stores is wasted—by careless handling and transportation, by poor storage and through bruising and handling by customers. Food is wasted, also, when it is hauled to market by truck or by train. Evidence based on damage claims paid by railroads shows that food losses in transportation are about 2 per cent of the total food moved. This may be caused by delays in shipping, lack of icing facilities, rough handling or other cause.

Aware of this situation, the War Food Administration established a year or so ago a food conservation program to help the American public in its natural desire to keep down the waste of food. We are now receiving some preliminary reports from various sections of the

country on the amount of food which has been saved. In some cities "Clean Plate Clubs" have been established, which pledge their members to "clean up their plates at every meal." Kansas City, for example, during a two weeks' campaign reduced the amount of its wasted food by 19 per cent. The city of Lansing, Mich., during a month's campaign reduced its food waste by 23 per cent. And in Charlotte, N. C., a two months campaign cut the food waste there by 28 per cent. Much has been done—but there is much to do.

We can't eliminate all the waste of food there is. Some of it is unavoidable. We cannot eliminate completely the damage done by rats and insects. We can't prevent blight and rot. We can't eliminate all the bruising and injuring of perishable fruit and vegetables, nor all the waste that occurs in the normal process of handling and preparing and serving food.

But much of it can be prevented. If we can save no more than a quarter or a third of the 20 per cent of our food supply that is now lost somewhere between the harvest and the garbage pail, we would have added enormously to our total food supply.

It is not my purpose to tell the American public how to do these things. They can figure that out for themselves and find their own ways to help solve this problem. It is my responsibility rather to point out the tremendous amount of food waste that can be prevented, and then it is the responsibility of the American people to think this over seriously and carefully and then for each person to do his individual best.

The farmers who produce our food have broken all production records in the last few years. They have done their part. It is up to the consuming public to see that the food they produce is used in the wisest possible way. The public must not let the nation down but must conserve food more carefully than has ever been done before.

HAZARD FROM ASPIRIN

Recent evidence that aspirin or the other salicylates may lower the prothrombin or clotting factor in the blood and thus contribute to hemorrhages reemphasizes the need for caution in the use of this drug. *The Journal of the American Medical Association* advises.

"The mass of evidence so far available," *The Journal* summarizes, "indicates that aspirin and the salicylates are among the least toxic of active pharmacopeial preparations. This status, however, should

not be interpreted as an excuse for failure to recognize hazards connected with their abuse or even under certain circumstances of established usage. Their ability to produce hemorrhage in some cases appears to be counteracted by early administration of vitamin K. It does not now seem necessary to administer vitamin K to all patients receiving salicylates; those who are to receive large doses for a long time may appropriately be given vitamin K."

Question Box on Feeding Babies

By Meredith Moulton Redhead, Ph. B.
Baby Counselor of Heinz Home Institute

QUESTION: For our first baby, the family doctor advised me to cook cereal eight hours in double boiler and strain it. Now we have a second child, and another doctor who suggests Heinz Cereal—and no cooking whatsoever. I am puzzled.

ANSWER: Both doctors gave you excellent advice. Ordinary cereal requires long and thorough cooking and careful straining to make it digestible for the tiny baby. Heinz Pre-Cooked Cereal requires no cooking *on your part* because as its name implies, it is thoroughly cooked by an exclusive process perfected after more than five years of Heinz laboratory research. By this process, highly nutritious, whole-grain cereals (whole wheat, corn, oats, rice) are blended into a creamy cereal of the most delicate flavor and fluffy texture

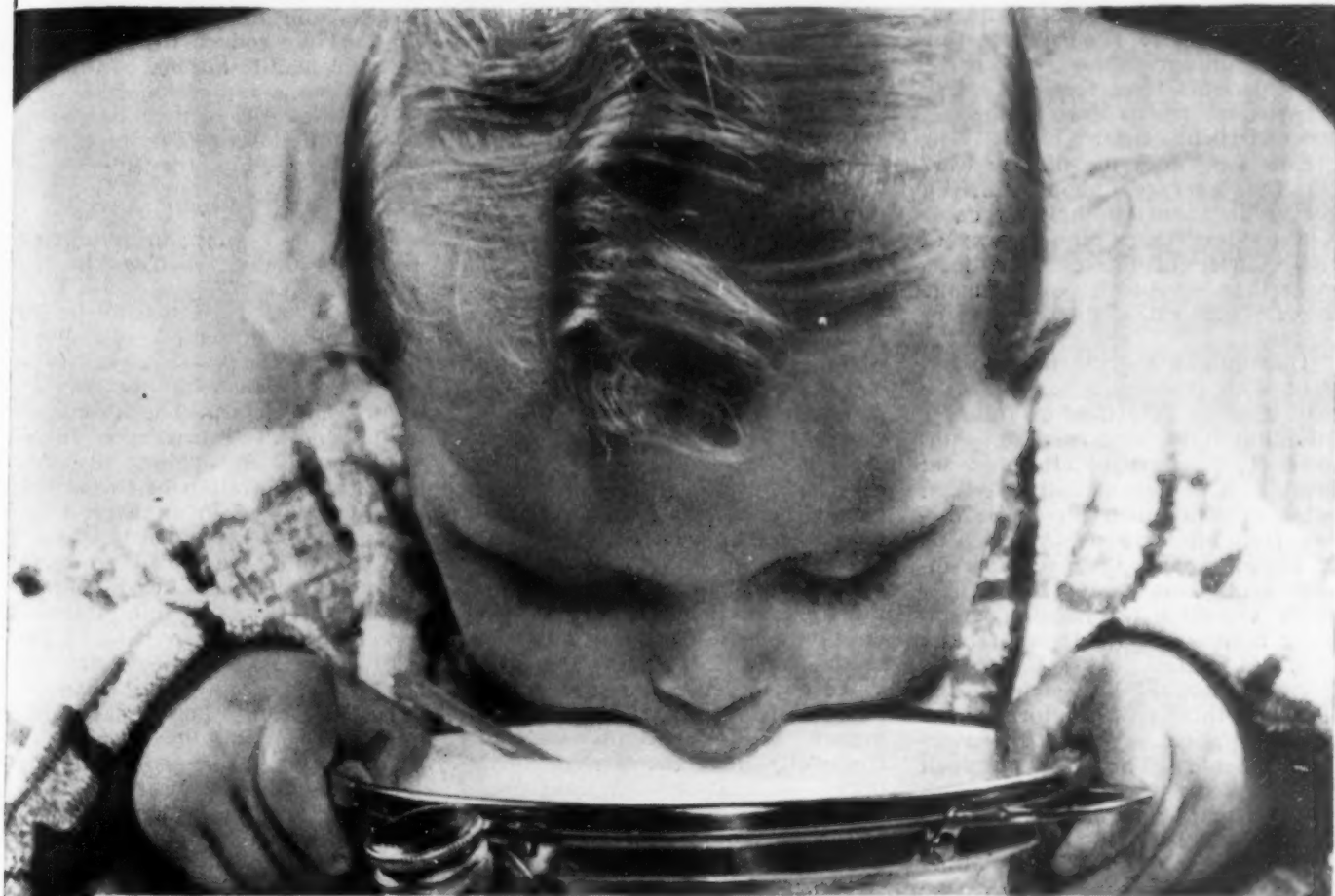
QUESTION: The Heinz people seem to take a lot of pride in the fine flavor, color and texture of their Baby Foods. But do these things really matter to a tiny baby?

ANSWER: Babies can't talk about their preferences. But—try feeding one! Psychologists are agreed that eating is one of the principal emotional satisfactions of infancy. Babies show a definite dislike for gummy or lumpy foods. What's more—the delicious flavor, fresh, natural color and smooth, full-bodied texture of Heinz Baby Foods are excellent and dependable indications of quality.

QUESTION: Doctor says Johnny has gone beyond the strained food stage—and suggests Heinz Junior Foods. Why can't he eat what the rest of us have?

ANSWER: There are a number of reasons why so many doctors advise Heinz Junior Foods as a transition between strained foods and family meals. When food is cut up for baby in the home, it is difficult to control the size of the particles—and digestive upsets may result. Family food is usually too rich, too highly seasoned for a young child . . . Heinz Junior Foods have been scientifically designed to meet the needs of babies—like Johnny. They provide highly nutritious food combinations—many whole-meal meat and vegetable dishes, and some of the most delicious desserts anybody ever ate.

DON'T WORRY TOO MUCH ABOUT BABY'S TABLE MANNERS



By Meredith Moulton Redhead, Ph.B.
Baby Counselor of Heinz Home Institute

YOUR BABY'S first solid foods go a long way toward determining his future health. To encourage normal appetite, it's important that a calm, happy atmosphere prevail at mealtime. So don't be too concerned about table manners at the outset. Start your baby on nourishing, wholesome

foods. Then let him enjoy himself—let him eat the way he wants to in the beginning. Here's a hint: Children really do like the flavor of Heinz Baby Foods. And no wonder. The 57 Varieties, prepared by H. J. Heinz Co., have been famous for their quality and flavor for 75 years. They now include 17 *Strained Foods* for infants, 12 *Junior Foods* for older babies and a delicious, *Pre-Cooked Cereal*.



57 Notice the difference in flavor, color and texture of—

HEINZ BABY FOODS

MADE BY H. J. HEINZ CO., MAKERS OF
 QUALITY FOODS FOR OVER 75 YEARS

Rheumatic Fever

(Continued from page 447)

Rheumatic fever may begin at any age. It begins most frequently between 5 and 10. The average age of onset is about 15 years, although there is some difference of opinion on this point and some believe that the average age of onset is lower. The higher figure, according to this belief, results from the fact that the older patients have forgotten early experiences which were in fact attacks of rheumatism.

How long does the disease last? On the average, about thirteen years. In about one half the cases it lasts less than nine years; in one quarter of the cases it lasts more than seventeen years; in one tenth of the cases, thirty years or longer.

The outlook for the average patient with rheumatic heart disease may then be described as follows: infection at 15; first cardiac symptoms at 28; cardiac failure at 30; death at 33. This statistical design helps to distinguish rheumatic disease from other diseases. It reveals in broad sweeps the problems involved in planning for it. It provides essential information about basic relationships between factors involved in it.

But we mustn't lose sight of the fact that this is the picture of the average patient. Who is the average patient? There is no such person.

These figures are not intended to be applied literally to the individual case. They certainly don't fit the many cases I know. One child developed rheumatic fever at the age of 7. The active infection continued for a period of about eight months. Then she seemed to be free of the infection for five weeks. Active infection reappeared and continued without interruption during a period of about two years with no signs of remission. The heart became seriously damaged. It developed numerous murmurs and became markedly enlarged. Heart failure followed, and the patient died at the age of 10. Another little girl acquired rheumatic fever at the age of 8. Heart failure of great severity appeared, with swelling of the legs and generalized swelling of the body. After three weeks, she began to improve. All signs of rheumatic activity subsided in a period of about two months. She is now 38 years old. She is married and has two children. She does all her own house work. Her heart shows very slight enlargement and a murmur which is only occasionally heard. Her

only troubles at the present time, 30 years after an attack of rheumatism from which she nearly died, are those of a psychoneurosis. The limit of the number of such variations is set only by the number of cases of rheumatism.

Again let me emphasize that average figures don't help much in formulating the outlook for individual patients. Here we depend more on the story of the particular case. When did the disease begin in that person? How frequent was the reinfection? How much cardiac damage has taken place? What is the state of the cardiac function? How favorable are the conditions for protection against recurrences and for treatment?

MANAGEMENT

AS TO TREATMENT, it is disappointing that we haven't a specific cure for rheumatic fever. Nevertheless, there are a great many things we can do which favorably affect the course of the disease. We know how valuable they are partly from the experience with those cases in which these measures are neglected.

We take measures toward building up the body defenses against infection—well balanced diet, abundant vitamins, fresh air and sunlight.

We avoid those situations which promote infection—fatigue and exposure to the cold and wet—for frequently an attack of rheumatism occurs in relation to a sore throat or an upper respiratory infection. While rheumatic fever itself does not appear to be caused by a streptococcus organism, a streptococcal infection seems to do something to activate rheumatic infection.

When the heart has become involved, we have an additional problem, that of reducing the work of the heart when its muscle and valves are acutely inflamed. Complete rest, preferably in bed, helps to limit the amount of permanent damage likely to result from a bout of rheumatic infection.

After the so-called "rheumatic activity" is over, absolute rest is no longer necessary. It may indeed be harmful. A certain amount of exercise is now desirable in order to keep the heart in a state of fitness. How much exercise depends, of course, on the degree of damage; it varies all the way from no limitation to restriction that is extreme.

The removal of tonsils as a means of controlling rheumatic infection has been the subject of a good deal of controversy. They used to be removed routinely. There is now an impressive body of doubt that

it does any good, and the tendency at the present time is to leave them alone unless they are large and infected and a source of trouble in the upper respiratory passages.

There are several drugs which may be put to good use in one or another phase of rheumatic disease.

The salicylates, such as aspirin, relieve the pain of rheumatic arthritis, also the muscular aches and pains. They reduce the fever and the toxic manifestations. Although there is some indication that very large doses are preventive and curative, the largest body of experience indicates that they don't prevent the development of cardiac disease, nor do they cure the disease, but they play an important part in reducing distress in the acute attack.

Fever therapy seems to be of some value in cases of severe chorea—the involuntary, jerky twitching which sometimes occurs in rheumatic fever. The fever may be induced by intravenous injection of typhoid vaccine. By this method, the duration of the attack may be reduced to an average of one fourth that of untreated cases.

In the more advanced grade of rheumatic disease, heart failure occurs which may result in shortness of breath and swelling of the legs. These patients often develop the extremely rapid and irregular cardiac rhythm of "auricular fibrillation." The digitalis group of drugs is applied successfully in this stage of the disease. In many cases, dramatic results are obtained. Patients otherwise bedridden are, as a result of these drugs, able to be up and about and carry on a gainful occupation—often involving hard work. There is little doubt that when they are systematically used, these drugs add several years of comfort and usefulness to the lives of these patients. Because the digitalis drugs vary a good deal in their strength, the Digitalis Committee of the New York Heart Association has for many years been providing its member cardiac clinics with a uniform specimen of digitalis, adopting the most successful methods of standardization. There are also new digitalis materials which enable these patients to take the drug for many years without upsetting the digestion.

For the group of more advanced patients with heart failure in whom even digitalis is not sufficient to maintain a reasonable state of well-being, the new group of "mercury diuretics" has provided a welcome boon. Confined to bed, usually with great suffering, by the methods of treatment available up to about fifteen years ago, such patients are

HUNGER LESSENS AS AGE ADVANCES

"But periodic starvation has no place in the care and conditioning of the old and is one of many useless middle age fads."*



To encourage proper alimentation of the elderly patient with minimum strain on digestive powers, physicians continue to suggest the frequent taking of Horlick's.

Rich in easily assimilated protein, carbohydrate, fat, Horlick's can be taken at frequent intervals without upsetting digestion or tending to cloy the palate.

Horlick's is obtainable at all drug stores

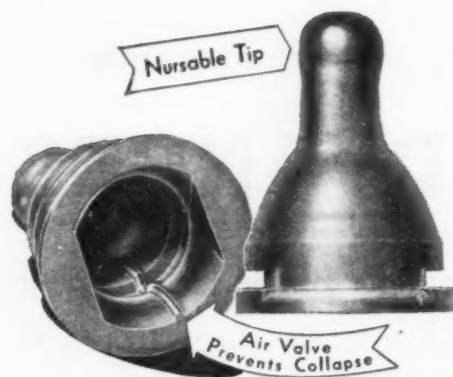
* Tuohy, E. D.: Feeding the Aged, Handbook of Nutrition, Pub. by Am. Med. Assoc., 1943, pp. 366-384.

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Use

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Peter Pan Nipples Improve Nursing

Babies nurse better with modern Peter Pan Nipples. Their air valves and special nursing tips help babies nurse naturally. Busy mothers appreciate the handy tabs that make Peter Pan Nipples easy to use. Three for 10c at 5c-\$1 stores. The Pyramid Rubber Company, Ravenna, Ohio.



You'll find qualities in the design of Lullabye furniture that build sound bodies, develop child character . . . and make mother's work easier too. See these attractive practical cribs and child groups at leading stores everywhere, or send 10c for entertaining nursery booklet, "It's Lullabye Time." LULLABYE FURNITURE CORPORATION Dept. 564, Stevens Point, Wisconsin



FINE FURNITURE FOR CHILDREN SINCE 1897

TAYLOR-TOT!
I LOVE MINE. USE IT EVERY DAY. INDOORS AS A WALKER AND OUTDOORS AS A STROLLER.

SEE YOUR DEALER OR WRITE THE FRANK F. TAYLOR CO. CINCINNATI 12, OHIO

now able to be up and about, leading a fairly useful life.

There is some indication that subtropical climates are more favorable for the control of rheumatic fever. There is less rheumatism in the southern states, and some children with rheumatic fever seem to do better there. The value of such a change of climate has, however, fairly strict limitations.

A word about the use of sulfa drugs should be added. In the past three or four years, considerable interest has developed in their use for the control of rheumatic fever. The most optimistic reports are encouraging indeed. Drs. Coburn and Moore have stated that the daily use of 2 to 3 grams throughout the school year reduces the occurrence of rheumatic attacks from 35 per cent to less than 1 per cent. In my own clinic, a study of a smaller group of patients by Dr. Messeloff failed to show any significant protection. Nevertheless, I think it may be taken as a fact that sulfanilamide exerts some beneficial influence in reducing the number of attacks of rheumatism. It isn't entirely safe. About 10 per cent of the patients develop toxic effects. Too, it should be noted that the drug does not cure the attack of rheumatism once it has started. Its effect seems to be exerted in controlling the streptococcal infection which precipitates the rheumatic attack. It will be interesting to follow the course of this new prophylactic measure.

In the management of rheumatic disease, one decision is paramount. Does the patient have active rheumatism, or is the disease in a quiescent stage? That decision marks the dividing line between active treatment and rehabilitation. It stands between the need for bed rest and the need for active exercise. The line isn't always easy to draw. If the patient has fever, a high white blood cell count, rapid heart rate and certain other indications, there is no doubt about the fact that there is active rheumatism. So also for the contrary—if the patient seems well and all these tests are normal. In many cases, however, the signs are equivocal, and time and judgment are required to decide the issue concerning the presence or absence of rheumatic activity.

The facilities available in the New York metropolitan area for the care of patients with rheumatic fever were subjected to analysis by a subcommittee of the New York Heart Association as part of a general survey of health facilities under the auspices of the United

Hospital Fund in 1937. The results were published as a chapter in a rather bulky volume entitled "The Hospital Survey for New York." Parts of this volume are useful reading in connection with the problem of facilities for treatment of the disease in any community.

The service facilities required for rheumatic fever are complex, because the course of rheumatic fever is complex. The fifteen or twenty year stretch from the beginning of the disease to its end covers the need for the acute hospital, the chronic hospital, the sanatorium, the convalescent home, the outpatient clinic, home medical care, visiting nurse service and medical social service.

The relationships among all these services must be so integrated that the care of the patient continues without interruption. Take the case of the patient with acute rheumatic fever who has spent two months in the hospital. The infection has subsided and he is discharged. He is anemic. He is undernourished. He needs building up. Unless another agency is ready to take on that task, he returns home—perhaps to a dark, gloomy and crowded tenement. He is soon out on the street, and in a short time he is back in the hospital with another attack of rheumatism. Isolated efforts won't do in the care of rheumatic fever. Attempts are being made to develop institutional facilities of such character and such quantity as to enable the rheumatic patient to pass from one to another as the need arises without interrupting the continuity of care. Unfortunately, we are still far from attaining that goal.

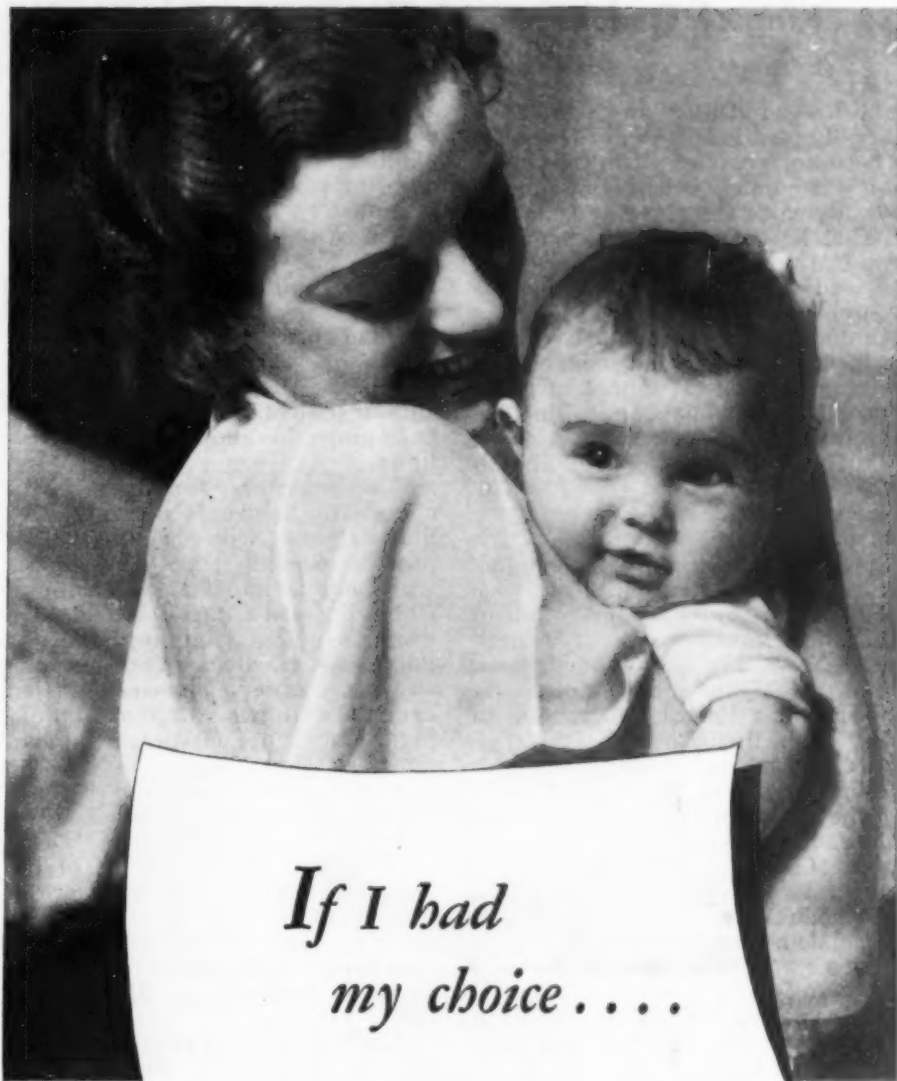
The extraordinary development of cardiac clinics in this country in the last quarter of a century represents one of the most important trends in the care of patients with rheumatic fever. The clinic not only provides diagnosis and treatment but also serves as a base of operation and coordination of the various other medical and social services essential for the best care of the patient during the long years of the ambulatory stage of the disease. Its particular objectives are to conserve and maintain the patient's health, to reduce the number of preventable breakdowns and reduce the need for repeated hospital bed care.

However, in New York City and elsewhere there are many patients in attendance at cardiac clinics who should be in hospitals or other types of institutions. The recent survey referred to showed that 50 per cent of children with rheumatic fever who enter the hospital

are discharged in an average of two weeks or less. This is what one would expect in, let us say, acute appendicitis, but not in a chronic disease like rheumatism! What this means is that many of these children are sent back home or into the cardiac clinic before they are ready for ambulatory care.

The acute hospital is not the most appropriate place for the care of a chronic disease like rheumatic fever. The most pressing need at the present time is for sanatoriums for rheumatic fever. Such a sanatorium, for example, is the St. Francis Sanatorium for Cardiac Children, under the medical direction of Dr. Leo M. Toran. It is one of the first and foremost institutions of its kind in the United States. The buildings are situated in a beautiful country spot in Roslyn, Long Island, and arranged to provide maximum air, light and sunshine. The institution accepts only children with active rheumatism. The average stay is ten months, and it extends for years in some cases. Nurses in key positions are especially trained in the care of rheumatic children. Excellent laboratory facilities are there for complete diagnosis and for following the course of the patient's stay. Records are kept in such detail and form as to play an important part in the plan of treatment. Complete bed rest is maintained until all signs of rheumatic activity have subsided. The care is individualized. In order to keep the stay from becoming the relentless succession of anxious days which institutions so often are for children, every effort is made to create a homelike atmosphere, with quiet and relaxation, free from regimentation and gloomy discipline. Bed-side teaching and occupational therapy are part of the routine. These are also individualized to the capacity of the child. They add the element of adventure and cheerful preoccupation. Patients with distressing symptoms are treated in private rooms. When rheumatic activity subsides, these children live in another building in groups of twenty-five, in the atmosphere of a boarding school. A system has been devised there for the gradual transition from the sanatorium to the fuller activities of the patient's home. Institutions of this kind hold the best prospects for these patients at the present time.

It should be emphasized that any program of treatment of rheumatic fever must take account of the fact that the personality of the patient is as important as his heart, and that it won't do to risk wrecking the one while trying to cure the other.



*If I had
my choice*

Yes, if I had my choice I would choose the same mother all over again. She takes such good care of me, feeds me on time, keeps me warm and comfortable, gives me a bath every day and helps protect my skin against chafing and irritation with 'Borofax'.

'Borofax' is an invaluable aid in helping to protect baby's tender skin. This protective, water-resistant ointment helps to counteract excessive drying of the skin and relieves irritation caused by wet diapers. Apply after every change of diaper and following baby's daily bath.

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'Borofax' Borated Ointment contains 10% boric acid in a bland ointment base. Available in tubes of 1 1/4 oz. 50¢.



Easy to use; no spilling;
a little goes a long way.



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King of Quacks

(Continued from page 414)

and Cooper Union in New York City, then an academy in Baltimore, where he became a drugstore clerk and immediately began giving medical advice to the store's customers.

That he enrolled as a student in the University of Maryland school of medicine in 1903 but failed to complete a year's work, flunking examinations in all but two subjects. That he attended some classes in another medical school in Baltimore the following year and in 1906 received a diploma from a third school, the Maryland Medical College, after a year's work. The licensing authority in at least one state has since declared that the diploma was a forgery, but at one time or another Schireson was licensed to practice medicine in Vermont, Massachusetts, Connecticut, New Jersey, Pennsylvania, Ohio, Michigan and Illinois. He never had a license to practice in New York, though his first successful chain of advertising offices, or "clinics," was in New York City.

They learned that he established offices in Pittsburgh, New York, Detroit, Chicago, Philadelphia and numerous smaller cities, and that he made extravagant claims and circulated fake testimonials to get patients. That at one time he used in his offices a worthless electrical contraption which he claimed would cure all diseases of the eyes, ears, nose, throat, lungs and chest, as well as rheumatism, paralysis, cancer, skin diseases and secret weaknesses of men and women. That he hired spurious assistants whom he advertised as European specialists and that he paid commissions to these assistants as well as to press agents, patients, beauty operators and others who sent him business. That he charged excessive fees based on knowledge of the patients' means obtained by such extra-legal methods as rifling their pockets while they were being treated. And more.

They found that he was run out of New York, Pittsburgh, Detroit, Chicago and other towns as fraudulent representations made in his applications for licensure were discovered or as angry patients complained to state registration officials, or courts, that they had been swindled. But the nationwide stench which followed his operation on Sadye Holland, whose legs he was going to straighten, never resulted in a criminal prosecution. She had signed a release. Schireson moved on. Thereafter, it was disclosed, he habitually cursed and abused patients who complained of pain under his monstrous ministrations.

The reporters found a crazy climax to Schireson's career. In Philadelphia with a flourishing practice among silk-stocking gulls who paid as much as \$1,500 for a single operation, Schireson in 1939 was facing a mounting tide of judgments, tax liens, debts, lawsuits and court orders—the accumulated dregs of a slippery lifetime. Thinking to outwit his pursuers as he had done so many times before, he signed a voluntary petition in bankruptcy, declaring assets of \$334. Actually, he had thousands, which—to his misfortune—agents of the Bureau of Internal Revenue were in process of uncovering at the time. He was indicted under a federal charge of fraudulently concealing assets in bankruptcy. He went to jail.

Now the medical practice acts in Pennsylvania and New Jersey, where Schireson held licenses when he went to jail, give the licensing authorities the right to revoke the license of any person who is "convicted . . . of a crime involving moral turpitude." On this ground, New Jersey promptly revoked his license.

But New Jersey misjudged its man. Slick at lawing, Schireson (still in jail) pointed out through attorneys that, technically, he had not been convicted. To the charge of concealing assets, he had pleaded "nolo contendere"—legalese for "I

pass," or "I don't dispute the charge, neither do I acknowledge guilt." Ultimately, astonishingly, the Court of Errors and Appeals upheld his contention. After a year in jail, Schireson was still licensed to practice in New Jersey and Pennsylvania. He still is. Until a few weeks ago, immediately following publication of the *Record* articles, when he was arrested on a charge of obtaining money under false pretenses, he was still practicing. (This new charge was the result of Schireson's recent operation on a man who wanted to be a singer but had trouble with his nose, which was broken in a childhood accident. Violent hemorrhages followed the operation. The man nearly died.)

It was in 1936, the *Record* men found, at a hearing in connection with his unsuccessful application for a license to practice in the District of Columbia, that Schireson gave himself his title. Claiming at first that he had been persecuted (age-old cry of quacks!), he gave ground under insistent questioning about his education, his career, his history at law. "All right," he said finally, defiantly, "I was king of the quacks!" His right to that distinction has never been challenged.

This king of quacks some day will die, but there will be more quacks. For the human being is a credulous animal. All the laws that are written or can be written, all the licensing regulations, medical society rulings, court pronouncements, threats, fines and jails cannot save men and women from the gullibility that quacks live and grow and get rich on. People want beauty, yet they have the will to believe not only in the great truth of plastic surgery but in its bogus exploiters. People want health, but not the discipline that health culture demands. Old men want back the vigor of youth after youth's vigor has been expended. Out of these desires, and hope, and the will to believe comes faith in the false promises of the fakers.

So there will be quacks as long as there are men and women who are ignorant and as long as there are men and women who seek a short cut to beauty or health. Like the putrid fungus, the quack dwells in darkness—the darkness of men's minds. Only knowledge can banish darkness of the mind. In the failure of people to acquire knowledge, agencies of government must protect the fools against their folly, the ignorant against their lack of knowledge, the stupid against their inability to reason. How long will these agencies continue to tolerate Henry Junius Schireson?

Doctor Aesop's Fables—

W. W. Bauer

The Wolves and the Sheep

"WHY should there always be this implacable warfare between us?" said the wolves to the sheep. "Those evil-disposed dogs bark whenever we approach you and attack us before we have done you any harm. If you would only dismiss them, there might soon be peace between us!" The sheep were easily beguiled and dismissed the dogs. The wolves destroyed the unguarded flock at their own pleasure.

"Why should there be this constant, implacable warfare between

us?" said the makers of certain secret remedies to the people. "Those selfish doctors, whenever we offer to cure you of your diseases, begin to attack us. If only you would pay no attention to them, we would get along famously together." The people, easily deceived by these fine words, listened and believed them, and would not harken to the warnings of the doctors. The wolves, lest you have forgotten, destroyed the flock.

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The New Zenith Radionic Hearing Aid

Another Zenith "First!"

DAILY, all over America, hard of hearing persons who had given up hope of being helped, or who could not afford an adequate hearing aid, are finding a new world of happiness. They are discovering the thrill of "Radionic Hearing" with this high quality precision instrument at about one-quarter the price of other vacuum-tube instruments on the market today!

Zenith, pioneer in radionics and world's leading manufacturer of radionic products exclusively, has brought the hard of hearing "Another Zenith First." It places the fine precision quality that modern science and engineering can produce within reach of *all* who need it.

If we at Zenith never made a dollar on the New Zenith Radionic Hearing Aid, we would feel repaid a thousandfold by the expressions of delight, the smiles and in many cases the tears, of sheer gladness on the faces of these grateful people.

For the first time, many of them are able to hold vital wartime jobs and do their rightful share in Uncle Sam's wartime emergency. Many are hearing, *for the first time in years*, the voices of their children, their families, their friends. Handicapped youngsters, too, can now be saved from lives of failure and misunderstanding due to hearing deficiencies. 78% of all who are buying this revolutionary new instrument have never owned a hearing aid before!

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TROPICAL MEDICINE

By HENRY E. MELENEY

BEFORE the present war, comparatively few people in the United States were interested in tropical medicine, but now the country is fully awake to its importance.

The Army and Naval medical schools have developed excellent courses in tropical medicine and have given both academic and practical training to hundreds of medical officers and enlisted personnel. The Association of American Medical Colleges has established a program for training medical school instructors. They attend intensive courses in the United States and also go to tropical America for practical experience. Centers have been established for the distribution of parasitologic and pathologic specimens used in teaching. Maps and texts have been prepared by the National Research Council and distributed to medical schools. Lecturers on tropical diseases have been assigned to medical schools and military hospitals. Medical schools have increased the time devoted to tropical medicine in their curriculums. Tulane University in Louisiana has expanded its Department of Tropical Medicine and is establishing a practical experience center in Mexico. Columbia University in New York City is establishing a strong Department of Tropical Medicine. State and city health departments are training personnel in the epidemiology and diagnosis of tropical diseases.

In addition to these training operations, a tremendous amount of research is being carried on, and several excellent new textbooks on tropical medicine and parasitology have been published in this country. Medical journals and local medical societies are being used to familiarize the medical profession with tropical diseases. All of these

various activities are being supported by funds from the federal government, philanthropic foundations and a number of commercial firms. Finally, many medical and sanitary officers and enlisted men in the armed forces are gaining first-hand knowledge with the troops in tropical areas.

Immediate use is being made of the knowledge acquired by these intensified activities to win the war. But this knowledge—which represents a tremendous amount of time, coordinated effort and money—will not only help win the war and protect the United States from the importation of tropical diseases in returning military personnel. It will also contribute to the reestablishment of health in the invaded countries and assist them in solving their health problems as soon as they are released from the bondage of the invaders.

I can speak particularly of China because of several years of residence there and because of my close association with the program of the American Bureau for Medical Aid to China. China has suffered for decades—and probably for centuries—from malaria, dysentery, cholera, plague and typhus, in addition to the great cosmopolitan diseases such as tuberculosis and malnutrition. All these diseases have increased during the Japanese aggression, not only in the occupied areas but also in the unoccupied areas, despite the excellent public health program of the Chinese government. The training of medical, nursing and laboratory personnel has been seriously retarded by the war. China will need, and I am sure it will welcome, the assistance of the United States and other friendly nations, as soon as lines of communication are reestablished,

in furnishing expert personnel, supplies and equipment in order to restore its health program in liberated areas and to extend it throughout the entire country.

In her turn, China has shown the true spirit of world cooperation in announcing, through her delegate to the United Nations Relief and Rehabilitation Conference held in Atlantic City, that China is ready to provide relief materials for other parts of the world. He emphasized that China was particularly able to furnish drugs such as ephedrin and certain mineral products which are found nowhere else.

In the European area Italy, Greece and the Balkan countries have serious problems in malaria, dysentery, typhus and nutrition which American experts and supplies can help overcome. In Africa, the Pacific Islands and other parts of the tropics, new fields for studying and controlling tropical diseases should be opened up.

The United Nations Relief and Rehabilitation Administration is itself giving training in tropical medicine to physicians and other scientific experts and is accumulating supplies for their use in establishing programs of disease control and in improving the general health of liberated areas.

Thus, by making the fullest use of the tremendous activity in tropical medicine generated by the war, the United States can, and I believe it will, contribute largely to the establishment of conditions favorable to a durable peace. Active international cooperation in the improvement of health in regions of the world which have too long suffered under the burden of preventable diseases will help tremendously in maintaining good will among the peoples of the world.



Health-Impairing Anemia

may become a serious threat if the wartime diet is permitted to be deficient in the quantity and quality of proteins.* Thus meat is nutritionally more important than ever now, not only because of the high percentage of protein it contains but also because its protein is of highest quality, able to satisfy every protein need of the body.

*Deficiency of the right kind of proteins in the diet may not only lead to anemia but also make its correction difficult since iron, the usual remedy, can prove effective only in the presence of an adequate protein supply. In their report on a study of blood regeneration, published in the *Journal of the American Dietetic Association* (May 1943), Drs. McKibbin and Stare point out that "biologically complete proteins are generally the best hemoglobin builders," hemoglobin being the substance in the red blood corpuscles which must be regenerated to correct anemia.



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Menopause Symptoms

To the Editor:—Does the menopause occur at once in a woman who has had a complete hysterectomy, with both ovaries removed? Are any skin symptoms or sensations ever connected with menopause?

Following a hysterectomy, is it possible for the other organs of the abdomen to fall from their correct positions—in particular, the urinary bladder?

Nebraska.

Answer.—The menopause occurs immediately after the removal of both ovaries and the uterus. In addition to the cessation of menstruation, the menopause is frequently attended by other symptoms which may be completely absent in some women; hence many of the changes attributed in the lay mind to this condition may not appear. This variability in the appearance of symptoms may accompany the menopause produced by surgery as well as that occurring in the course of advancing age. Flushing of the skin of the face and upper chest is one of the most common symptoms.

Although not at all frequent, fall-



Model
121

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QUESTIONS AND ANSWERS

ing of the bladder may occur following hysterectomy, or it may recur if it was present prior to the operation. The pelvic organs, like those in other regions, are suspended by fibrous tissue; weakness of these supports is the most common cause of falling of any organ.

Heat

To the Editor:—There are places in the world in which the temperature at times may rise to 140 degrees Fahrenheit, and yet people live there. I understand that a temperature quite a number of degrees below this would be fatal in the human body. What maintains a living temperature in the body in the midst of such terrific heat?

Connecticut.

Answer.—When the air temperature is higher than the body temperature, the latter is kept at its usual level through the secretion of sweat and its evaporation into the atmosphere. Whenever a liquid covering the skin evaporates it takes up heat and thus cools the body. For example, when you put a little ether on the skin, the ether quickly evaporates, and the skin feels colder.

It is relatively easy to keep the body temperature down when the air is dry, but when the atmosphere is muggy, or saturated with moisture, the sweat does not evaporate easily and the body gets uncomfortably warm. Hence the saying, "It is not the heat but the humidity."

Compare the ease with which one can stand the higher temperature of a Turkish bath—hot *dry* air—with the distressing effect of the Russian bath—hot *moist* air, and you will realize that it is our ability to produce and evaporate sweat that keeps our body temperature at the normal level when the air temperature is high.

Eye Examinations

To the Editor:—As chairman of the health committee at this college, I am anxious to have the physical examination of students as meaningful as possible. In testing for

normal vision, frequently deviations such as 20/30 or more in one eye or both eyes are found, often with the students' never having had an eye examination and not wearing glasses.

Our committee is anxious to obtain a standard of what is considered the amount of defect that should be referred for examination. Will you kindly let me know if any standard has been set up by the American Medical Association, and if not, what is the commonly accepted usage for referral?

Indiana.

Answer.—This question has been discussed at length by the advisory committee to the Eye Health Committee of the American Student Health Association, and no standard of visual defect necessitating referral was ever adopted. However, it is the practice to request refraction in the case of any student with maximum visual acuity of less than 20/20. Such refraction should be performed with the use of so-called drops, which dilate the pupils in order to rule out serious errors or actual disease of the eye.

Fasting

To the Editor:—Some persons think we should fast frequently and give the price of meals to China. I wonder how far we should carry that advice, not being responsible for all the world's cruelty and greed? I don't feel well when I don't eat an average amount of food every day.

Colorado.

Answer.—Religious or ethical questions which might be raised in this query are beyond the province of this column and must be answered by each according to his belief.

The propriety of fasting must be determined by the circumstances attending each case. Some of us habitually eat too much and are often painfully fat. Such persons could profit by a reduction in total food taken. But even if a food reduction program is decided on, it should be undertaken sensibly and carried out slowly, having in mind the type of daily physical exertion required for one's daily work.

Sudden deprivation of food in a healthy person for a short period is usually not serious and results in temporary discomfort only. If practiced by one doing heavy work, the ability to work is usually impaired. Restrictions in food intake of a person already ill may precipitate serious complications.

So far as saving of food by fasting is concerned, the saving would



IN ONE of the busiest shipyards on the Pacific Coast, news-photographer Bob Leavitt caught this picture of how a Sonotone Consultant steps up America's man-power. G. Lee M...*, (left), a graduate of Butler University, and a minister for 25 years, got so hard of hearing that a few years ago he was forced to give up preaching and go to farming. Thomas J. N...*, (center), whose hearing has been failing since he was 5 years old, just couldn't keep a job. Yet today, both men are turning in a man's-size day's work in this Tacoma shipyard. M... checks all incoming rail shipments, N... is a marine electrician on the fitting docks—thanks partly to Sonotone, and partly to the third man in the picture, Sonotone Consultant Dean R. P...*, himself a Sonotone wearer.

At the present minute Consultant P...*'s big job in life is to see that these two men get *uninterrupted hearing* so they can give *uninterrupted work* to America's drive for

victory. And night and day he does that job... not only for these two men but for scores of other Sonotone wearers in the bustling shipyards, aircraft and munitions plants in the Seattle area. And there are hundreds of other Sonotone consultants doing that same job all over the United States... and room for many more!

America's ever-growing interest in better hearing, together with the pressing need of rehabilitating battle-deafened men from the armed services, is opening many new opportunities for sincere and sympathetic men and women who see a fascinating and satisfying life-work in helping other people hear better. Such men and women, if they can qualify, will be given the thorough training that every Sonotone Consultant gets, and will be established as members of the Sonotone organization. Whenever possible, they will be located in their own communities. Full information can be had from the nearest Sonotone office.

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*Name omitted in accordance with medical principles.

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be relatively small as compared to the savings which could be made by avoidance of waste.

Rh Factor

To the Editor:—I have heard about the Rh factor and would like to know its relation to having children, having been told that it is difficult for Rh positive parents to have a child born alive.

Also if this is the only reason that it is unwise for Rh positive persons to marry.

I would like to know what the test is that determines the Rh factor. What is the full name for Rh?
 New York.

Answer.—The Rh factor was so named because it was found first in the red blood corpuscles of the Rhesus (Rh) monkey. It has no other name. The factor occurs also in the corpuscles of human blood but not in all persons. There are Rh positive and Rh negative persons. The marriage of an Rh negative woman to an Rh positive man may lead to harmful effects on the blood and health of their offspring. This untoward result is explained as follows: The father being Rh positive, some of his children will be Rh positive and from an Rh positive child in the uterus the Rh factor may pass through the placenta into the blood of the Rh negative mother. The mother in response may produce a new substance which, passing through the placenta into the blood of the child, causes destruction of its red corpuscles, general anemia and jaundice. The danger lies not in the marriage of an Rh positive man and woman but in the marriage of an Rh positive man and an Rh negative woman. That a man is Rh positive is not by itself good reason against his marriage, except possibly to an Rh negative woman. Whether a person is Rh positive or negative can be determined by properly made blood tests, but it is not possible, at least not yet, to determine by blood tests that the marriage of a given Rh positive man and a given Rh negative woman is bound inevitably to result in disaster to offspring.

Tuberculosis

To the Editor:—Is it true that Sweden has more tuberculosis victims than any other country? If so can you give me a correct (or scientific) reason for this? The country is known to have a comparatively good climate.

New York.

Answer.—The National Tuberculosis Association tells us that the tuberculosis death rates per 100,000

population of various countries published during 1933 are the latest available. This table shows the rates for thirty-one countries. The United States at that time held sixth position with a rate of 55, while Sweden was in thirteenth place with a tuberculosis death rate of 94.2 per 100,000 population.

In general, it might be said that the tuberculosis death rates are high in those countries with overcrowded and congested populations and poor economic conditions, while countries with few large cities and a large rural population have the lower rates. There are, however, so many other conditions that influence these rates that great care must be taken in coming to any definite conclusions. Climate, as such, has very little bearing on the amount of tuberculosis present in a certain community or country.

In the United States in 1939 the tuberculosis death rate for the country as a whole was 46.8 per 100,000 population. Arizona, in spite of its so-called ideal climate, has the highest death rate from tuberculosis in the country, 162.6. New Mexico, California and Colorado are other states with good climate but with high tuberculosis death rates. The cause of these high rates, of course, is the fact that so many patients with active tuberculosis go to these states with the hope that climate will cure them of tuberculosis.

All the southern states have high tuberculosis rates because of the large Negro population. As a group, Negroes have a rate from three to four times as high as that of whites. The same holds true for Mexicans and Indians.

The western states, especially those sparsely settled and with little congestion of population and no large industrial centers, have the least tuberculosis—Iowa, 18.9; Idaho, 18.9; Nebraska, 16.6, and Utah, 16.1 head the list of states for this country.

In 1930, climate as a factor in the treatment of tuberculosis was given a valuation of about 10 per cent. Today, with the greater use of surgical collapse methods, the value of climate has been cut down materially. Sanatorium care under the supervision of a qualified and experienced physician provides the best promise of a sure and quick way to success in the treatment of tuberculosis.

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a three-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed. Anonymous letters are ignored.

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Education and Medicine

(Continued from page 427)

the curriculum here and there, giving it a new emphasis, a more practical value. The tendency is growing. Much science teaching in secondary schools, particularly life science, is presented from the personal and social health standpoint of the student.

Curative and preventive medicine and public health are based on many sciences besides the life sciences. Preventive medicine has profited by discoveries in chemistry, physics, bacteriology, psychology, sociology—even astronomy. The implications of all these fields of knowledge, sifted and selected by the school physician, are enormous in their bearing on the health of children. Mental hygiene is revolutionizing child guidance. We are just on the threshold of learning the marvels of the chemistry of the human body and the interacting relationships of hormones, vitamins and food chemicals. Child growth and development is a fascinating

study still in its infancy. The public schools are vast laboratories for the study of man in the making.

The schools are now awakening to their opportunity. Teachers are becoming alert to the fact that most disciplinary, attendance and learning problems of children are health problems and that their solution is in the teachers' own hands. If a child is not making normal progress it may be that a physical handicap is holding him back; or perhaps he has built up a failure complex because of frustration due to home friction or school maladjustment. Adolph Hitler as a boy was pampered by his mother, beaten by his drunken father and misunderstood at school. The human race is now paying a terrible price for its failure to direct a brilliant but deviated mind into constructive channels. Similar failures have been duplicated endlessly.

The public needs to know better what the schools are trying to accomplish. The local parent-teacher groups are a potent aid here. They are helping to interpret the schools' objectives and accomplishments to

the community. Parents are coming into the classroom also, to consult with school physicians, nurses, teachers and principals. In order to solve a child's problem of adjustment it is often necessary for teacher, doctor and parent to confer together. Each presents a different facet of the same problem. By cooperation they view it in its proper perspective. The physician or the psychiatrist points out to the parent the physical, mental or social handicap that is hobbling the child in his efforts at achievement. The adult education movement is growing. After all, is there any logical reason why formal education of anybody should stop altogether at 18?

The modern school health education program is becoming so broad that it promises to displace completely the old, academic, subject-dominated curriculum. The school doctor is learning to think educationally. The educator is learning to think in terms of preventive medicine. They are coming closer together in their objective approach to a common problem. In the school of the near future the teacher will recognize that each child is a potential wage earner, voter, homemaker and parent. Every fact, skill, attitude of mind and habit that will develop his potentialities in achieving these ends usefully and happily will be offered him.

The present world conflict is a trying time for the schools. They are made to shoulder the blame for many of the past mistakes of our society. The large numbers of uncorrected physical defects of our young men are pointed to by military authorities as evidence that the schools have failed to educate for health. The softness and lack of motor fitness of thousands of youths are held to be due to misdirected physical education programs—too much play and not enough hard work. Undoubtedly some of this criticism is merited, but the home is equally at fault. Society as a whole, of which the schools are only a part, is to blame.

Moreover the war, by draining off manpower, is making it increasingly difficult to graduate well integrated, healthy young citizens. There is no doubt, however, that this war, with its revelation of our inadequacies, will result in vastly strengthening our health education programs in the schools. The schools have the machinery; they have the know-how; and they can acquire the personnel. When victory is won we may look for a great forward movement in which the health of the American people will be greatly improved. The schools will do their share.

JOINT PROGRESS THROUGH A JOINT COMMITTEE

A specific expression of hand-in-hand progress by education and medicine, so effectively treated by Dr. Goffin in his accompanying article, is afforded by the history of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association. This committee was organized by joint action of the two associations in 1911, under the chairmanship of Dr. Thomas D. Wood. Among the outstanding accomplishments of the Joint Committee have been the publication of a volume, "Health Education," which was the pioneer textbook in health education originating from authoritative sources and which is still, in its third, revised 1941 edition, a standard reference book in health education.

In the early years of its existence, the committee endeavored to supply the lack of reference material for teachers by publishing bulletins on such subjects as light in the classroom, sanitation of rural schools, mental hygiene in the classroom, problems related to hearing difficulties, interpretation of the role of the nurse in school health work and many other topics. With the growth of health education in the schools and the appearance of authoritative textbook and reference material, the Joint Committee turned its attention to current problems, such as investigation of school health policies (in cooperation with other agencies); sanitary factors in school lunchrooms; schedule fatigue in school children and, soon to be issued, statements on the value of ultraviolet light sterilization of the air in classrooms and wartime problems in the field of self medication. Of special value under wartime conditions is the Joint Committee's manual on health inspection of school children conducted by teachers in the absence of medical and nursing personnel. This publication, prepared in peacetime for use in rural areas, is proving of special significance in time of war.

—W. W. BAUER, M.D.

Body Mechanics

(Continued from page 435)

the fall with hands. Keep body relaxed. Distribute impact of ground evenly along the entire body.



CRAWLING. To prepare to crawl, bend the left knee and raise it as high as possible with the inside border of the left foot against the ground. The hands are placed opposite the ears. The body is pulled forward by the action of the arms and the bent legs. Keep body close to the ground always.



Thomas L. Luzier, President and Founder of Luzier's, Inc

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Child Care Center

(Continued from page 429)

child care center was opened for operation.

Because Mr. Quinn has been able to gain the cooperation of the community, it has been much easier to make the project successful. We will never forget the day we opened, and no cook! No cook? Well, we had a cook because the president of the PTA came over; for three hectic days, until we were able to find other help, she cooked. Yes, and how she cooked!

If any one had met the local chief of police, who is also the attendance officer, on almost any Friday last summer, he would have stared in amazement at the number of "truants" evidently being brought into school. He might have forgotten for a minute that it was vacation time, but he would have rubbed his eyes—because all the children in the car were clad only in bathing suits! It is surprising how many small bodies can crowd into one car when they are all wearing bathing suits! "The Law" often transported a load of our children to a nearby swimming pool where, under the supervision of the life guards and some of the center staff, they spent many happy days. It was a great privilege to go on these trips:

"You have to be awful good all week to go to the pool on Friday—only the very best kids go!"

We have tried to teach the children to make the most of simple pleasures, to learn to enjoy picnics, hikes and other such events, and they really have to learn to enjoy some of these things. Youngsters who have depended on the movies for most of their entertainment have to learn to like other things.

"What do you do to keep them busy?" some one frequently asks. "Do they play all the time?"

At present, they are all—even the smallest—making Christmas presents for the Crippled Children's Hospital. Oil-cloth and cloth dolls

and animals, puzzles and scrap books are in various stages of construction. Many different kinds of handwork such as basketry, painting, weaving, sewing, embroidery and knitting are taught, but the children all prefer to "make something for somebody." As Carol says, "It seems better."

Besides, we must not forget the group that often gathers around the big table in the corner of the room for homework, now that school is once more in session. As the staff at the center is made up of qualified teachers, they are ready to give assistance to any child who seems to need it.

Practically all our children come from the kind of people who want to know that their children are safe, well fed and happy during the time they are working.

"It's worth the two dollars a week to know he is somewhere safe and not getting in trouble!" Jimmy's mother told us one day. "I can work better."

Besides feeding our children and keeping them safe, we are trying to develop desirable attitudes by giving each child a feeling of security, a feeling of being important and wanted. We are trying to make our center as much like a real home as possible.

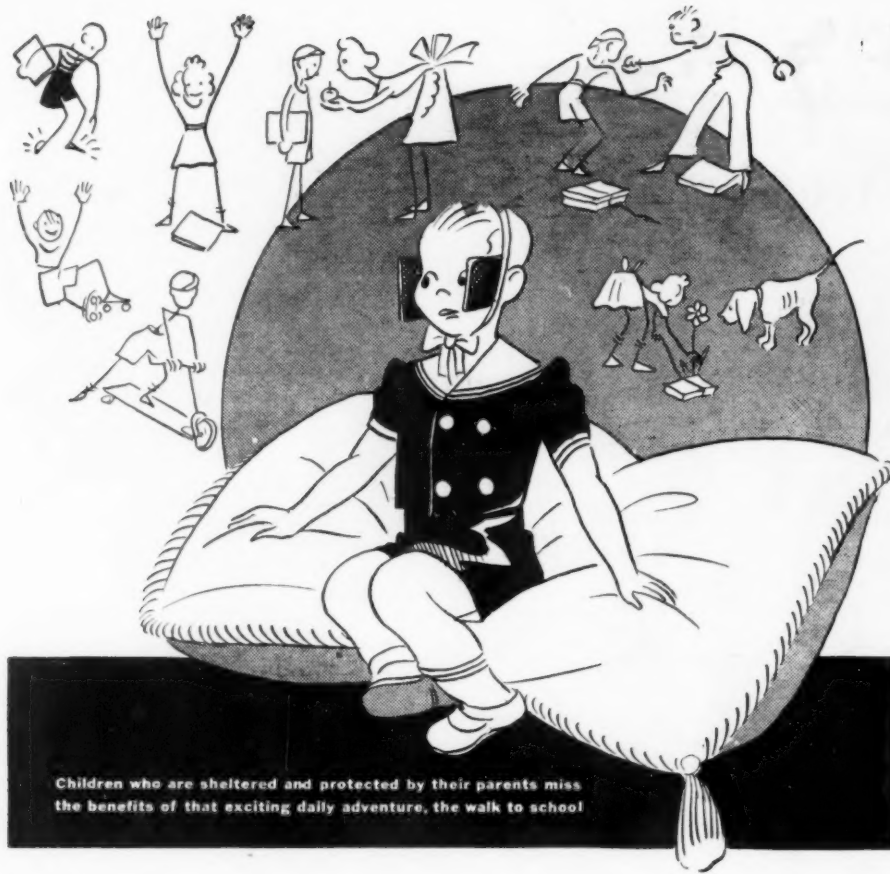
Do we feel it is all worth while? We certainly do! Though it has been hard, heartbreakingly hard and discouraging at times, we have weathered the first few months, and we are planning to continue, to extend our services to smaller children as soon as plans can be made. It is worth while, we know, as we look at our group—a group that has improved in health and conduct since being with us. And we feel that if we have prevented one accident, if we have been the means of making one mother a better worker or helped just a little in the building of character, it's all worth while.

DETERMINING DATE OF OVULATION

A record of body temperatures, taken rectally daily before rising under standard conditions, is an inexpensive and simple method which very often will indicate the date of ovulation and thus the time when conception is most likely to occur, Pendleton Tompkins, Philadelphia, declares in a recent issue of *The Journal of the American Medical Association*. He describes charts and accompanying instructions

which can be given women so they can keep an accurate record of daily temperatures.

Dr. Tompkins' method is based on the findings of many investigators that a woman's temperature under normal conditions is lower during the first part of the menstrual month and that the transition from a low level to a higher one occurs at about the same time ovulation occurs.



Children who are sheltered and protected by their parents miss the benefits of that exciting daily adventure, the walk to school

Taking the Children to School

By MILES J. BREUER

SUPPOSE we spend a few minutes waiting across the street from any large school building in any city of the United States, at an hour when the children are coming to school. Little knots of them straggle in from this direction and that; down the vista of the street ahead, a long line of children threads its way slowly toward the school grounds, with now and then the sally of a red sweater out of the ranks or the flutter of the bright dress of a child running. A picture like this always arouses feelings of sentimental tenderness in the heart of one who beholds it, and a welling of optimistic hope for our country of tomorrow, when these tots will be guiding its destinies in our places.

But there is another side to this picture, which makes the person who has a little psychologic foresight wonder considerably about the future. Even in this day of gasoline rationing, automobile after automobile drives up to the curb, opens its doors and deposits children, usually one at a time, occasionally two or three, on the school

sidewalk. Old cars, gleaming, middle-class cars, occasionally a long, low, powerful machine; rich and poor, high and low, one after another brings its load of children to school. While no actual figures are available on the subject, a little casual observation will convince one that there is a large number of children who are taken to school in their parents' cars—even now—morning after morning, and brought back evening after evening, the school year round.

These parents all undoubtedly feel sincerely that they are doing their children a service by driving them to school in state and comfort such as Alexander the Great or Napoleon could not command. The children like it, and that gratifies modern parents. It saves fatigue and obviates some traffic danger. It appeals to a soft spot in the parent's heart; incidentally, it provides a feeling of power and self-satisfaction and gives the opportunity for a regular little excursion to the parent. If these parents only knew that such indulgence was doing their children incalculable harm,

they would never drive to school in the car again. If they knew that by their mistaken and short-sighted pampering they were undermining the foundations of health and character and planting seeds of nervous trouble and failure, to say nothing of using precious fuel, they would consider it far better to drive the car into the river and leave it there! It has probably never occurred to most of these mistakenly indulgent parents that such a trifle as giving a child a ride to school every day might have any serious consequences.

The everyday walk to school may be the making of a child's whole life. To you or me, that walk may appear to be only a few prosaic blocks of city or suburban streets. It means nothing. But to the child, it is a long, thrilling, adventurous journey, full of interests and delights—mingled with fears and troubles. Many wonderful things happen during its course as he trudges it day after day, things that in the child's small life are as significant as the adventures that happen, or fail to happen, to you or me. The child's mental and emotional development needs these adventures—the big dogs, the policemen, the accidents, the fire trucks, perhaps the tramps in the alleys, and the thousand and one other happenings and objects that he encounters along the way. A rounded and stable mental development is impossible without some such routine daily adventures as these. To us they are insignificant, because we have forgotten how we built our own life around them. Yet they play as important a part in the development of the normal, healthy citizen as does the formal education of the schoolroom.

The long hike to school every day, with all its thrills and all its troubles, teaches the child to observe the world and to react adequately to whatever he finds in it. Reduced to simplest terms, the greatest and grandest successes in human life consist of an adequate reaction to whatever stimuli the world has to offer. On these trips the child notices people and houses and other children, and birds and dogs and trees and flowers; he begins to think about these things, to wonder and ask questions about them. He has time to stop and examine a curious bug or watch a man fixing a telephone wire on a pole, or make friends with the man in the little corner store, or find out what is in the hole in the empty lot.

But if he is whisked to school and back daily, with his horizon shut off by the padded walls of a tin box; where is his mental devel-

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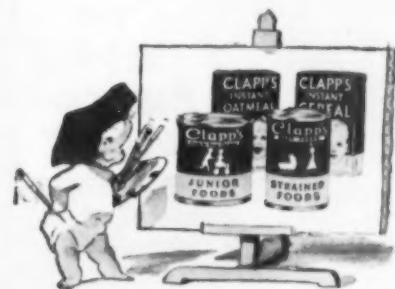
5. Who'd believe that grownups shouldn't eat? Well, they shouldn't—not baby foods, anyway. Babies need these special foods. Don't use them for anyone who can get along on ordinary fresh or prepared foods.



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opment to come from? If he is deprived of the time and opportunity afforded by this daily walk to see life, and if he is shut up so that life cannot get to him, what will he be like when he grows up? Since a character, a personality, a capacity for success, is built up of the things that happen to a child and of his reactions to them, it follows that if there are no stimuli there is no growth. I've seen people like that: the bookkeeper who has sat on a stool for forty years, oblivious to the fact that the town has grown up into a city about him; the tourist who went around the world and never saw anything but the different drinks in the places he visited; the man and woman living in the midst of our romantic and adventurous life of today, yet bored to death by monotony because they have not learned to see adventures and thrills right under their noses.

The voyage to school is the child's sole opportunity to see the world and learn what to do about it at an age when he is forming habits which will determine his whole character, disposition and outlook on life thirty to fifty years later. The trifle of driving him to school in a car every day, and many parents are keeping it up today at no small sacrifice of convenience, may make the whole difference between success and failure, happiness or misery.

At school age, the child is still training his muscles. They still are not under perfect control of his desires and have not developed perfect skill, strength and coordination. He must do a vast amount of running, jumping, playing, dashing aimlessly about and fighting in order to become a properly developed human being. Children who are made to sit on cushions and are deprived of the opportunity to go through the million random and apparently purposeless movements during their developing period are the ones who grow up into helpless hulks, clumsy and bungling people who are always having accidents, girls who cannot sew a seam, boys who cannot drive a nail. School days are the days when the body is building; on these days depend future strength, grace, skill and freedom of action. These days make the future inventor, explorer, aviator or engineer.

Those parents who drive their children to school in cars for the purpose of protecting them from supposed dangers are directly defeating their very purpose and achieving a diametrically opposite result. The investigation of three deaths and several injuries at an intersection in a city where the way to school lay across a con-

gested traffic artery showed that the children who had been struck were without exception those whose parents had previously taken them to school steadily to avoid traffic dangers. The child who was accustomed to being taken and then, later, unexpectedly had to go alone, or who was taken while he was small and then allowed to go alone when he became tall enough to look capable of taking care of himself, was the one whose training in the caution and dodging of hazards was inadequate. When the crisis came, he was not equipped to handle it. Don't be too sorry for the two tiny tots who grip each other's hands desperately and gaze with frightened eyes at the huge trucks lumbering by, looking anxiously about in all directions and suddenly dashing across when the way is clear. Warn them properly and turn them loose. Their percentage of accidents in the future will be far smaller than that of the pampered, protected ones.

The walk to school—gradually, step by step, from easy and natural beginnings—develops self reliance and initiative. Which child will better face the difficulties and respond to the demands of the life into which he will be thrust later in this thoughtless and churning world, the child who is carried back and forth to and from school like a sack of potatoes or the one who has to battle snowstorms and not be tardy, who trudges through rains and faces winds and gets to school on time every day in spite of traffic or mud or sore toe?

Cold and distance, within reasonable limits, will do the child no harm. He pays little attention to such things as long as there are adventures, dogs and trucks and empty lots and other children, along the way. The child minds such hardships much less than you or I should. But, if he is permitted to get started, he soon learns to expect and demand comfort and indulgence. He learns how to get his transportation by skilfully simulating all sorts of disabilities and inabilities in order to work on the sympathies of his parents. If he finds that he can get away with it, he can find more reasons he must ride than you thought were possible. It is a serious mistake to indulge little complaints of children; a doctor's opinion as to the true nature of the complaint is far less expensive in the long run than the damage to the child's future.

The free contact with other children on the way to school is undoubtedly the most valuable factor in a developmental sense. In school there is formal discipline; all follow a standard pattern. But this

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standardization will not shelter the child always. Life in the world after school is free. It has many knocks and jabs, and these are cruel to the sensitive child who has not learned to take them. Sometimes they are so serious that they disable the child completely from usefulness as a citizen and make him a complaining neurotic who lives only on visits to the doctor.

On the way to school, we see the weeping little girl who has lost her way, two of the nicest little chaps you ever saw in a grim fight with bloody noses and torn shirts, the big bully who persecutes the smaller children, the older girls who make life miserable for shy little boys, the shrinking, timid tots standing and waiting at the intersection—each passing minute adding to the worry in the tiny faces because of the imminent "tardy bell." Worries and troubles! Our hearts are torn in sympathy for the tender little souls who have to take the world's harsh blows. Our impulse is to shield them and keep these cruel things from wounding them—until they are big enough and strong enough. But they will never be strong enough to bear such wounds, however big they grow, unless they learn now. The school period is the period when the adult is forming. If he fails to form correctly at that time, he is a wreck and a burden on society, and only skilful, strenuous and prolonged effort can repair him. These jolts that look so cruel to our eyes do not distress the children as much as they do us. They are the most necessary and wholesome things in the world for building up the proper stamina in the child for facing the world. They are indispensable; nothing will take their place in teaching the child to adjust himself in a world which will never change to suit anybody's whims.

Actually, of course, the automobile ride to school is simply a symbol of the whole attitude of parents toward their children. Two attitudes common today are responsible for the many types of nervous disease, crime, maladjustment and even mental illness that are found to be tremendously on the increase. One is the feeling on the part of parents that they must save their children the hard times they themselves have had. No character was ever built without some sort of adversity. It is well for parents to try to save their children from disastrous mistakes. But they cannot save them from meeting the ordinary difficulties and problems of life without crippling them forever mentally. Hard times will be necessary for training constructive and progressive citizens and avoiding the development of parasites on society.

The second error on the part of parents is to use the child for their own indulgence or satisfaction. A child is neither a plaything nor a scapegoat for gratifying one's emotional escapes. The father who has an inferiority complex and assuages it by excessive and arbitrary authority over his boy is breaking that boy, wrecking the firmness of his will, spoiling him completely for any independent action in later life. The mother who has been disappointed and pours out all her love on a son makes of him in later life a man who cannot have normal social relationships with other women, frequently not even with other men; he becomes more or less of a recluse and loses his normal usefulness to the world, besides being tremendously unhappy.

Any act of parents toward their children which does not take into consideration the far-reaching effect on the child's future is dangerous.

Convalescence Can Be Fun

(Continued from page 431)

will certainly be slight. The average stomach is a hard working, abused creature. It would be considerate for you to give it a rest while you are resting. Just calm down, conjure an "appetizing" picture and eat—three to five meals a day, as prescribed, or if you are not allowed to eat, drink it down!

The interims between food hours usually bring mail. Mornings and afternoons hold big moments for news from the outside world. If you feel up to it, write a few letters

yourself; this will increase your chances of receiving more than convalescent cards.

After you have been tidied and rested, open your door and admit one or two visitors; but take them in small doses. Visitors can tire you unknowingly.

If you are recovering from an operation, speak out and receive due admiration and respect for all you have been through. Compare notes with other operation victims; then find something else to talk

about. Your operation, fever or wreck may interest you still, but it is best to forget. It is almost unbelievable how quickly pain can be forgotten. Let your friends do most of the talking, too. You should conserve as much energy as possible.

When it comes to rest, you should be aloof; be alone at least several hours each day. Rest and quiet and a bit of sleep are all chief nourishers in life's feast. If you are not able to cat-nap, let this be your time for meditation. Try a little soft music from a bedside radio for accompaniment or think long, lazy thoughts. Lie low and breathe deeply and refresh yourself. This rest will store new moral and nervous stamina for days to come. As you accommodate yourself and your interests gradually to the outside world again, you will discover a new you. You will be astonished at your revitalized personality as health returns. It has been said that "Lying in bed, one feels an organic kinship with all the life of the world, larger than ego, older than time."

After an illness the mind is unusually keen. In stages of convalescence you will find new interests and talents that may have been dormant in you until now. Attempt new things; work out new ideas while you are in bed. A new outlook is highly exciting after weeks or months of seeing the world by rooftops or a bit of sky. I went to bed one February and did not see below the rooftops until April. During the cold days it was difficult to believe that spring would come, but it did. When I saw the new green of growing things, I felt there never was such a spring. Never was there such fun in doing things and in being alive.

Pain can be forgotten or even cured by having a hobby or an interest aside from your conventional likes. Famous folk have hobbies, from Roosevelt to Hitler. Hobbies can give maximum satisfaction from a minimum investment. You can ride your hobby as you like. Hobbies are indeed rest cures for overtired and understimulated nerves.

In the leisure of convalescence, bed thoughts often bring out literary talents. All your pent-up, inhibited feelings can be let out on paper. Many a genius in the literary hall of fame has been a bed scribbler—Elizabeth Barret Browning, Robert Louis Stevenson, Edward Trudeau. Who knows? You may emerge from bed a genius.

If you have the urge and some surplus energy, and if the doctor

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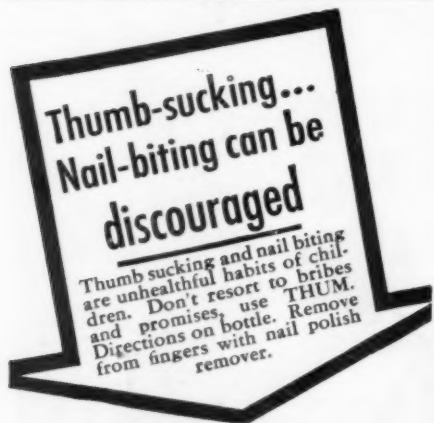
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says you may exercise a bit, try these:

1. Sit up from your pillow; stretch your arms to the side and push the walls away; stretch your arms high and feel tall; if you can manage, work forward and touch your toes.

2. Take your mirror and look at yourself. Perhaps you don't like your looks. Shut your eyes, then open wide in astonishment; roll up in horror—look away left—look away right; surprise!

3. Tilt your head back to the pillow, not in it. Draw your head back on a line with your chest; of course you are sitting up straight. Relax and drop your head forward, then back again. This will strengthen your neck muscles. But if your head goes "round and round," don't go on.

4. Massage your own back. Lie down flat on the mattress. A flat, hard surface is preferred, but now you are doing exercises in a soft way. Clasp your hands around both knees and draw them gently to your chest. In a gentle fashion, rock back and forth on the lower part of your back. Let the hands go and roll the knees over the tummy, beginning right, then across left, down on left, back again to right. If you are a surgical patient, however, no back massage.

5. If you don't feel up to anything else, you can at least wiggle your toes. Making some tension in the back leg muscles and stretching the toe muscles will strengthen the nerves under the arch and make for greater elasticity when you walk later. Work the toes downward. Keep the toes down straight and draw the feet toward each other without moving your heels. Your feet should be kept about one foot apart.

6. Exercise your voice. When you have no one to talk to, talk to yourself. Modulate your tone and practice on the sound and articulation of your words. The sound of your voice can do much to make friends and influence people.

There is the subject of gadgets. You are entitled to all bedside luxuries. Sing out for a comfortable back rest. They come in gay cretonnes, with soft, padded backs and arm props. Have lots of pillows, too. They help maintain a comfortable position and ease the tired spots. Have a bed table convenient for books, water, medicines, pencil, note pad, clock and all your personal miscellany. Above all, beg, borrow or buy a small radio. Intelligently and judiciously used, a radio chases boredom and offers endless variety for moods and emo-

tions; it keeps you in timely touch with the hurrying world, with people and events.

If you are going to be a thing of beauty and a joy forever, you must keep up your appearance, even in bed. There is no place like bed for finding beauty. Acquire simple beauty habits while you have so much time to consider yourself. Rest your face and lose that strained look of restlessness. Put your best face forward. A bright, responsive look makes for beauty and pleasant tranquillity. Time on your hands makes attractive ones. You can do an excellent manicure, and, if you are bored with your toes, tip them off with a gay shade of polish to match your fingertips. Try out a new coiffure; an up-style should be convenient and attractive against the background of your pillow. Spray your locks with cologne every now and then; they will look noticeably freshened. Have lots of your favorite powder for dusting and for a soothing finish after the alcohol rub. Satisfy your esthetic being. Perk up and dab a touch of color on your cheeks; take the shine off your nose; add a tinge of red to your lips. Make any gesture for beauty. When you are tired and have a desire to bite nails, wiggle your scalp instead with the tips of your fingers. It helps loosen the scalp and the tension, too.

Bed days are fine to discover what the well dressed mind is reading. You have time to catch up on all the books you never have time to read when you are up. Books in bed can be a frolic for the mind. You may read as you like. If you would be transported elsewhere via book; if you are bored with friends; if you would be amused, politically informed, thrilled with a mystery; if you would indulge in a light romance—consider the book. Take time out between the sheets for recreation and diversion through the printed page. Your book tastes may be entirely different in bed. Choose your book to fit the amount of concentration you can summon. Do not forget the endless variety of magazine offerings.

Here are a few definite don'ts to observe:

Don't have dithers and doldrums. Your point of view is most important in making a quick recovery. Keep your emotional balance. A wholesome philosophy means less emotional fatigue.

Don't be petulant and childish. There is nothing so dangerous as considering no one or nothing but yourself.

Don't feel sorry for yourself. Think of the "you" coming later,

with new strength, new vitality, new health—a complete new being. Health means wholeness; get coordinated while you have time.

Don't imagine things: that you have heart trouble if your heart pounds over a new excitement; that you are having a relapse if your head goes round in circles and you feel dizzy when you first sit up—it's a natural feeling; that you have a temperature if you get suddenly hot all over; that you are not getting better. As playwright Carroll says, "Life has an uncanny way of going forward."

Don't overtax your strength. Let the old energy return gradually. You are constitutionally a bit inadequate now.

Don't worry. Let your mind calm down and relax. Worry will wear a strong man down. You will build up your body via your mind.

And so to sleep. No sedatives allowed, unless it's doctor's orders. If you must count sheep, or if you are a worrier in the dark, cultivate drowsy digressions on pleasant thoughts; think yourself into some shut-eye. In the dark, you have complete release from many daily complexities. In the quiet of night thoughts you may discover resources within you that give new courage and new resolution. Night is the time to test the power of your imagination, as well as your capacity for dreaming. Noel Coward says that nights during convalescence are nicest of all. There is no obligation for you to sleep, because you have rested all day and you can rest again tomorrow. Life outside is incredibly remote. You don't have to be energetic and get things done. No one expects anything of you. Now is the "luxury of lying still and making faces out of the shadows on the ceiling," says Mr. Coward. You will be up and out before you get too bored.

To the convalescent, loafing may become a noble art. Complete mastery of your time and activities will make you fit again to "live most and serve best." The present is a part of time out, never to be known again. It is time for careless optimism. Take leisurely what the people of the world are busy about. In these days of bodily inactivity and mental peace you will find yourself. You will see the life ahead with the pleasantly exciting expectation of the unknown. You will emerge from bed soon, strongly elated, proud of your new powers, even if a bit wobbly afoot.

After convalescence, what then?

Anything! Anywhere! It doesn't matter what you do or where you go, as long as you get somewhere, and not in bed again!



The burden she *needlessly carries*

Like so many women, she suffers from "visual isolation" because of sub-normal vision. On her face you can see the strain of eyes that are constantly trying to pierce the haze that seems to cloud the world around her.

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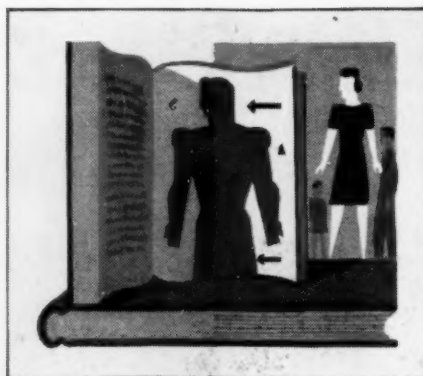


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The Rights of Infants

By Margaret A. Ribble. Cloth. Price, \$1.75. Pp. 118. New York: Columbia University Press, 1943.

Doctor Ribble discusses the early psychologic needs of infants, the importance of meeting these, methods for so doing and the effects of failure to understand and gratify these needs. Her thesis is that in early infancy child and mother are, in effect, in a symbiotic relationship, and that the healthy development of the infant, or the furthering of those processes of integration leading to physical and emotional stability and intellectual growth, is dependent on an appropriate functioning of the mother in her relationship with the child. In late years, it has become a truism that children thrive best if they receive adequate and loving care at the hands of stable and mature mothers, rather than routine treatment designed to meet physical needs only as expressed in calories and time intervals of feeding. Dr. Ribble's book, however, is no mere restatement of this concept. In a thoroughgoing and workmanlike manner, she exposes the difficult tasks the child must encompass in making his earliest physiologic adaptations to an extrauterine environment and reveals precisely the manner in which the mother's contact with and handling of the child further or render this adaptation more difficult. The discussions of oxygen hunger and sucking are impressive and informative. Infant feeding and early training in elimination are discussed primarily in terms of their significance in relation to development of emotional stability.

This important little book lays the groundwork for a sound mental hygiene of infancy and childhood. It is thoughtfully (one is tempted to say lovingly) written, enlivened by case histories, would be understandable to intelligent mothers, should be read by pediatricians and social workers and be required reading for medical students.

GEORGE J. MOHR, M.D.

**NEW BOOKS
ON
HEALTH**

Education and Health of the Partially Seeing Child

By Winifred Hathaway. Cloth. Pp. 216. Price, \$2.50. New York: Columbia University Press, 1943.

The term "partially seeing" as defined by the author includes visual acuities not less than 20/200 nor more than 20/70 for the better seeing eye, representing the best vision obtainable by all optical, medical and surgical means employed. Those cases in which impairment of vision is due to serious and progressive eye diseases or disturbances are also included, even if the vision is somewhat better than 20/70. It is pointed out that children so handicapped require special educational facilities in addition to those provided for in the regular curriculum, and that they are entirely out of place in schools and classes for the blind; also that none should be included who are mentally deficient.

It is stated that in the United States (including Hawaii) a total of 631 special classes, widely referred to as "Sight-Saving Classes," have already been established, providing for 9,000 children in 226 cities and counties. This leaves, however, more than 50,000 others, equally in need of these special facilities, unprovided for. The first two of these classes were established in this country in 1913 at Boston, Mass., and Cleveland, Ohio. The earliest effort of this kind was the founding in 1908 in London, England, of a so-called "myope school."

In this school, the pupils were entirely separated from those of normal vision and had no opportunity to participate in any classroom activities together with them. "Sight-saving" classes in the United States, on the other hand, are for the most part organized on what is called the coordinated or cooperative basis. Under this plan, the special class pupils join in with the regular classes in all possible activities—those in which normal vision is not a necessary requisite, and in these they are under the jurisdic-

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tion of the regular teacher. In their special classroom, with special equipment, they have their special "sight-saving class" teacher for all subjects which require reading, writing, typing and other seeing tasks. Several considerations of evident merit are adduced in favor of this plan.

Following the short introductory chapter of historical background material, the main body of the work is divided into three sections, the first dealing with administrative problems, the second with educational problems and the third with community social service problems. Administrative problems include the finding and selecting of pupils, organization of classes, location of schools and classes, general and special health services, selection and training of teachers, financing problems and lighting and equipment of classrooms. Educational problems include program and curriculum planning; cooperative relationships between teachers; methods of teaching reading, writing, arithmetic, art and handwork, with special equipment; the use of mechanical devices, such as typewriters, recording machines, the talking book and the radio; and child guidance.

While in large part the discussion of most subjects is a factual account of present practices, attempts are made to suggest new methods and improvements in certain directions. On the whole, the style is competent, if not uniformly interesting. However, the critical reader who is well versed in ophthalmology can scarcely fail to note occasional superficialities and misconceptions when the author refers even to some of the simpler technical matters. While most of the ophthalmologic material included is germane to the subject matter, there is some which is rather irrelevant and could well be eliminated. On the other hand, an important omission is that of the acuity of near vision, which is nowhere mentioned. Visual efficiency is rated solely on the basis of the visual acuity as determined on distance charts, and the blank forms illustrated for reports by ophthalmologists contain no provision for recording the acuity of near vision. It is apparently assumed that the acuity for near is proportional to the acuity for distance. While this is true in many cases, it is known that there are some exceptions in both directions. In this kind of work it is well worth while to find these exceptions and make provision for them accordingly.

WILLIAM F. MONCRIEFF, M.D.

Fundamentals of Personal Hygiene

By Walter W. Krueger. Fourth Edition, Revised. Cloth. Pp. 315. Price, \$1.75. Philadelphia: W. B. Saunders Company, 1944.

Many teachers will be familiar with the first three editions of this book and will want to have the fourth edition, which brings up to date all its valuable information on personal hygiene. The book is primarily for the use of students in their daily lives and for study as a textbook. This edition adds at the end of each chapter a list of questions for class discussion, topics for oral or written reports and bibliography.

For those who may not have seen the previous editions, the points of personal hygiene covered in the various chapters include nutrition, relation of body weight to health, hygiene of the mouth and throat, the value of physical activity, posture, care of the feet and skin, clothing and health, air and sunlight for health, mental health, recreation and rest, sex hygiene, health fads and follies and diseases and their prevention.

In the preface, the author lists the main changes in this edition—namely, new emphasis on posture and on the correct use of leisure time, new information on the hygiene of sex, and the most recent information concerning dental caries. The material on mental health, on health fads and on degenerative diseases has also been augmented and several new illustrations added.

VIRGINIA H. HOUCK.

DOCTORS AT WAR!

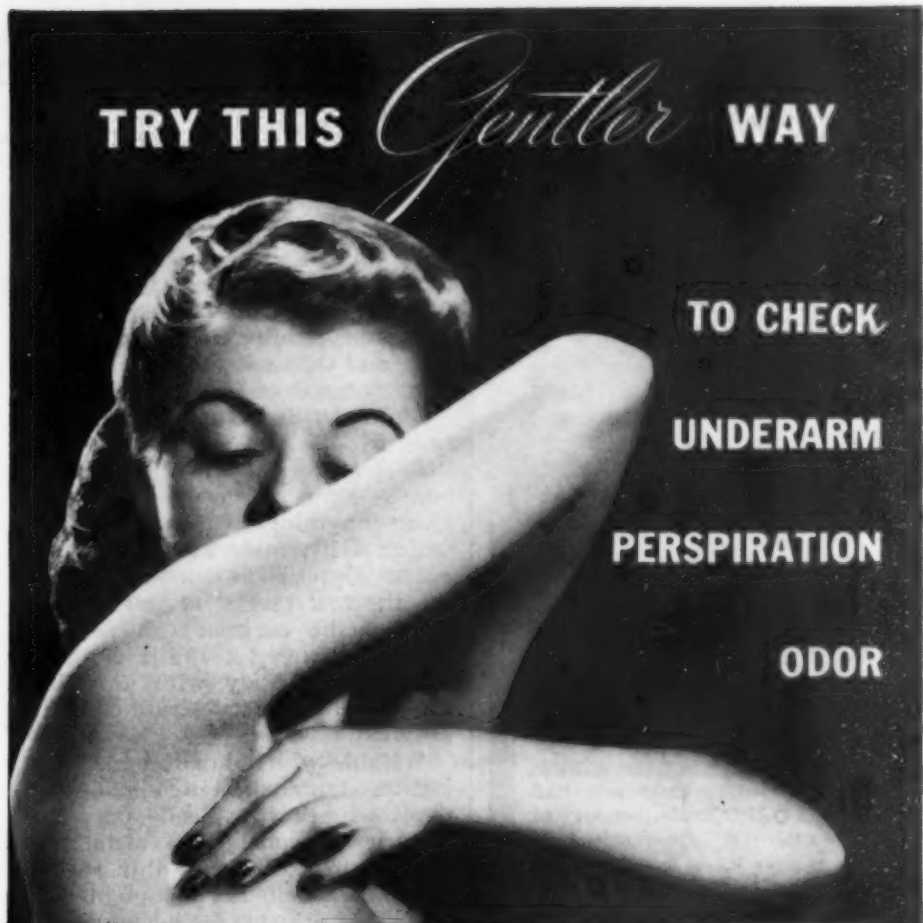
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HYGEIA
 NURSING BOTTLES
 NIPPLES AND
 "STERI-SEAL" CAPS

Tantalum Repairs War Wounds

(Continued from page 439)

evaluated their nonirritating qualities; and their ability to stand up until the job they had to do was completed, lessen the growth of fibrous scar tissue, be easily sterilized and readily available. Pundenz and Odom found tantalum the best material on most counts.

The chief disadvantages of tantalum are its expense and the fact that it is not absorbed within the body. Some surgeons hesitate to place anything within the body which will remain as a permanent guest. Opposed to such objections are the fact that it is soft enough so that the surgeon can reshape tantalum plates for skulls or other parts of the body with a rubber mallet while the operation is in progress.

Weight, which might be an objection—tantalum being about three times as heavy as lead—does not disturb surgeons. The metal can be used in exceedingly thin sheets, and patients do not complain of a feeling of pressure or heaviness.

Surgeons who have investigated the surgical virtues of metals state that vitallium and "18-8-S-MO" stainless steel are the only metals enjoying the same nonirritating qualities as tantalum. These, however, must be melted and molded to make plates, which renders them far less flexible for the surgeon's needs. Investigators have found many types of stainless steel and other noncorroding metals previously used to have an electrolytic action in the presence of body fluids.

According to recent reports, industrial laboratories have so perfected the manufacture of tantalum wire that it will be available at about the same price as catgut—thus removing another objection to its use.

Heavy tantalum wire is used to unite broken bones and do other substantial surgical chores which require strength and durability. Delicate tantalum wire, so fine that the surgeons and nurses must feel for it rather than see it, is being used in plastic surgery, to splice broken nerves and blood vessels and to anchor skull plates. Tantalum foil protects and helps to immobilize delicate tissues during repair processes.

During 1917 and 1918, according to the Surgeon General's report,

Army hospitals admitted 174,296 men as wounded battle casualties. Of this number 80 per cent, or 140,260, had wounds of the arms and legs. Experiences in both battle and civilian casualties show that one fifth of such wounds include injuries to the peripheral nerves, those which control the motion and feeling of the extremities. Thus in the last war, as John McCullough of the Philadelphia *Inquirer* points out, enough men for two infantry divisions were petitioners for nerve regeneration. When a nerve is cut, all sensation and muscular motion beyond the point of severance is paralyzed, and the nerve, beyond the break, begins to wither and die. The chances of recovery are much better and the work of the neurosurgeon is greatly facilitated if the nerve repair is made within three weeks after the injury. Until recently, a patient who could not be taken care of within three months was considered hopeless. But Army and Navy surgeons at Walter Reed Hospital and at the Navy Hospital at Bethesda are reestablishing nerve connections after considerably longer periods than was previously thought possible. Physical therapy aids such as the whirlpool bath, ultraviolet light, massage and contractible and galvanic currents play a part in helping to keep muscles healthy and maintain circulation so that nerves do not deteriorate beyond repair.

A new technic for the repair of severed peripheral nerves has been developed at Walter Reed Hospital. Hair-fine tantalum wire is used to stitch the ends of cleanly cut nerves. The repair portion is then encased in a "cuff" of tantalum foil so thin that even nerves and tendons at the wrist may be wrapped in it without causing the slightest deformity. Thus protected at the suture line, the formation of scar tissue which tends to stiffen and cause fixation of joints and muscles is held to a minimum.

Army and Navy surgeons have already used nearly 25,000 feet of tantalum wire to unite severed nerves, tendons and broken bones and to anchor skull and bone plates. The War Production Board has recently made this useful metal available to civilian surgeons. Without doubt, all of us will be hearing more and more about tantalum.

What to Do About Sore Feet

(Continued from page 419)

blood reaching the foot is decreased, and the feet become cold, numb or painful. The hair on the toes is scanty or absent. The nails lose their sheen and become loose. The skin is thin and shiny and readily rubs off, exposing a raw surface to invasion by molds or other potent organisms lurking between the toes, especially in feet that are not bathed, thus adding infection to parts which are bereft of nourishment due to inadequate blood supply. Often, this leads to amputation. These distressing symptoms are found to a great extent in those who are unfortunate in that they have been unable to provide themselves with facilities of proper hygiene and balanced diet and those who through lack of information or indifference fail to observe the dietary or hygienic laws of health. Even in diabetics, who are especially prone to these complications, it is amazing how much is accomplished by simply soaking the feet in soap suds, then rinsing and drying, following this with applications of alcohol and glycerine, which keep the foot clean and toughen the skin. This procedure, together with a nourishing, well balanced diet, will accomplish wonders.

Anatomically, the foot is a part of the leg. Therefore a leg malady is bound to cause repercussions in the foot. Thus it is in order here to say something about those channels—the veins—which convey blood away from the foot and leg upward toward the heart. These tubes—unlike the arteries, which are muscular and elastic and facilitate the distribution of blood to the tissues of the lower extremity—have thin walls which contain few muscular and elastic elements. Too, the veins are faced with the additional problem of directing a col-

umn of liquid upward toward the heart, against the pull of gravity.

Blood is propelled upward in the deep set veins by the contraction of the leg muscles surrounding them. The superficial veins lie just under the skin in the fat of the leg and are visible. No muscles encircle them to pump the blood out of them and upward. They are provided instead with valves which divide the column of blood into smaller columns. These valves, when normal, permit blood to flow upward but close to prevent back flow. In addition, there are veins with valves so arranged that blood flows from the superficial set to the deeper ones, furnishing a communicating path between the two.

If for any reason the valves are damaged by disease, or back pressure at the site of the attachment of the valves is increased, as in occupations requiring constant standing or in pregnancy, the veins are stretched at the valvular attachments and the valve facings cannot meet. This permits blood to flow back and distend the veins, which become large, prominent, distorted and twisted, presenting an unsightly appearance. However, we are not concerned so much with the appearance as with the after-effects. The increased amount of fluid in the veins increases the weight to be supported by the feet, and the result is tired and aching feet and legs. Fortunately, great progress has been made in the treatment of this condition. Substances are injected into the veins to cause the formation of a clot which ultimately converts the vein into a cord. If this procedure is not successful, a simple and comparatively safe operation is performed in which the main vein is tied closed. The blood then seeks another outlet, and in time new channels are established for its return to the heart.

Dentists in the War

(Continued from page 442)

liminary treatment in a French hospital, he was soon returned to the army medical center.

It was a depressed soldier that returned, embarrassed by his injury, afraid of his future life. The medi-

cal-dental team went to work. Slowly, but expertly, his jaw was rebuilt. Bone, cartilage, skin, skill and patience were applied over a period of a year. Later, the soldier used a mirror for the first time in more than a year. Looking back at him was his old familiar face—the one he'd been so used to. He plans now to be married soon.

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PSYCHIATRISTS have found that symptoms of mental illness in women may be closely associated with the drafting or prospective drafting for military service of a husband, brother, son or sweet-heart. It develops, however, that the connection is more apparent than real—and this news should come as a relief to thousands of women who thought they'd lose their minds if a loved one were to be drafted. At the Manteno (Illinois) State Hospital, Dr. Marianne Wallenberg studied the records of twelve women whose illnesses had Selective Service overtones. After careful exploration, the doctor concluded that in every instance a more deep-seated cause for the illness existed; the draft was either the precipitating factor, the final link in a long chain of inner conflicts, or it was simply the outward, apparent cause which the patient and her friends had seized upon as the only satisfactory explanation of her behavior. . . .

SCHOLARS who puzzle over Shakespeare's meaning when he spoke of "this very coinage of your brain" will be glad to know that the answer is at hand. Chemists have long reckoned the value of the materials in the adult human body at around 69 cents. But using lifetime earnings as his base, J. D. Laux of Corning, N. Y., in an article on "Economics of Obstetrics" now says the cash value of an adult may be estimated at something like \$30,000. The very coinage of your brain, Professors, is exactly \$29,999.31. . . .



PHYSICIANS who discover a new disease, devise a new method of diagnosis or treatment or develop a new operative technic do not

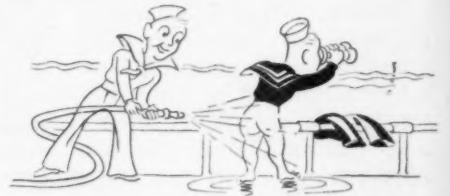
HEALTH IN THE HEADLINES

profit financially from their resourcefulness. If the contribution is significant, however, they do achieve a degree of personal immortality; the new procedure is known among physicians by the name of its inventor. Thus, for example, "Murphy's button," a device for surgically joining the ends of a divided intestine, is named for John B. Murphy, Chicago's famous surgeon of fifty years ago. Charles McBurney, a New York contemporary of Murphy's, lives in the memory of doctors as the discoverer of "McBurney's point," a spot on the abdomen directly above the normal position of the appendix and thus appropriately tender to the touch in acute appendicitis. The regard of physicians for the claim McBurney staked out on man's periphery is indicated by the fact that it has become a sort of hypothetical landmark. "Lenzmann's point is on a line joining the anterior iliac spines, about two centimeters below McBurney's point," anatomy instructors tell their students, as one might say, "McGuffey's store is on Main Street, two blocks beyond the Post Office."

But newer and better technics are constantly being developed in medicine. The medical students of another age may look on Murphy's button as a quaint historical fact rather than a working tool. Like the post office which is torn down to make room for the new highway, even McBurney's point may fade in importance as new methods of diagnosis emerge. The Army has announced that in its public health program for reoccupied territories it will use the Mazzini test, recently perfected by serologist L. Y. Mazzini of the University of Indiana Medical Center, to screen out syphilis. To this extent, at any rate, another new medical landmark goes up, an old, respected one is passed by. The procedure which Mazzini's method will replace is the one developed two generations ago in Germany by August von Wassermann.

SALT can be removed from sea water by a chemical recently developed at the Naval Medical Research Institute at Bethesda, Md. A kit about the size of a pint can will produce three gallons of potable water by the new method. . . .

FOR YEARS, most artificial eyes were made from a special, velvet-smooth glass produced in Lauscha, Germany, and exported under cartel control. When war came, exports were stopped, domestic stocks were soon depleted, and the 350,000 Americans who use glass eyes, which wear out pretty rapidly, were face to face with a possible return to the old black patch. Happily, the technical skill of American manufacturers has proved equal to the crisis; improved, American made glass is now pronounced superior to the original German product. Moreover, at least one American firm has experimented successfully with the manufacture of plastic eyes and is already making one plastic eye for every glass eye. At present, the iris in plastic eyes is still made of glass, but laboratory investigations are under way looking toward the development of an all-plastic eye whose iris is produced by a photographic process. . . .



COLD hip baths increase visual acuity and stimulate general neuromuscular coordination, Dr. Arthur H. Steinhaus and Albert Kelso of Chicago have discovered. Stinging cold showers directed over the area of the lower abdomen and pelvis and continued for five to fifteen minutes, they demonstrated, resulted in improved performance on vision and eye-to-foot reaction tests. Attributing the improvement to a toning-up effect on the sympathetic nervous system, the investigators suggest that such baths might be used to increase alertness and efficiency in monotonous military and industrial tasks. Warning to cold bath enthusiasts: "Over-all showers were followed by depression of the functions studied; apparently the greater loss of heat in an over-all shower more than offsets any advantages from the stimulation." . . .

TSUTSUGAMUSHI fever is characterized by headache, chills, malaise, fever, rash, deafness, drowsiness, coughing spells, loss of appetite, pain in the joints and sometimes serious mental disturbance. According to Army doctors, tsutsugamushi is prevalent in Japan during the summer months.

Sounds promising.

—R. M. CUNNINGHAM JR.